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General Education

A REVIEW

THREE-QUARTERS of a century ago, the celebrated French historian, Ernest Renan, observing the expansion of higher education in the United States, remarked that "countries which, like the United States, have set up a considerable popular instruction without any serious higher education, will long have to expiate their error by their intellectual mediocrity, the vulgarity of their manners, their superficial spirit, their failure in general intelligence." This is a typical reaction of European aristocrats to our policy of extending higher education to an ever-increasing proportion of the population. Whether this national policy is sound and whether the graduates of American institutions are typically less intelligent, less spirited, and less mannerly than those of European universities would be difficult to determine. But that some American educators share Renan's views on the evils of popular higher education, is shown by the recent utterances of at least two college presidents. They believe that the extension of general education recommended in the report of the President's Commission on Higher Education will adulterate liberal education and in the long run lower rather than raise the intellectual level of our people. It is abundantly clear, however, that the majority of Americans, educators and laymen alike, hold a contrary point of view.

Most Americans have fewer misgivings about trying "to make race horses out of burros," by extending educational opportunity, than they have about making burros out of potential race horses, by denying it to thousands of capable youth. As a nation we have from the beginning been committed to the principle that the success of democratic government depends upon general understanding among the people. As life has become more complicated, increasing amounts of education have been required for intelligent and informed citizenship. The general education movement is the normal outgrowth of this democratic philosophy of education. It is both an extension upward, and a basic modification, of education to adapt it more closely to the demands of contemporary life.

Present interest in general education stems from an awareness that higher education has been too much shaped by the needs of specialists, in an aristocratic society, the members of the professional and the directive classes. Higher education in this country is patterned after the German university, an institution based upon a social philosophy and a way of life totally alien to our deepest political convictions. It was designed to serve and to perpetuate a static society in which a social and intellectual elite directed the destiny of the nation and the lives of the individuals who composed it. To perform the functions of government and to render the various professional services in such a social order, highly specialized experts were needed. The necessary training for these services was provided in the universities for a small and constant percentage of the population.

American higher education was modeled upon this aristocratic institution, and in spite of some democratic modifications, the curriculum continues to be oriented toward the needs of the future specialist or professional man. The general educa-

tion movement is a reaction against this philosophy. It is an attempt to democratize American higher education, first, by adding several years to the preparation of youth for the responsibilities of citizenship and, second, by changing the character of this education from a body of specialized subject matter, basic to advanced study, to a broad intellectual experience preparatory for the common activities of life.

To what extent has the philosophy of general education influenced policy and practice in American colleges and universities? In terms of actual changes in curriculum and teaching procedures the influence has not yet been widespread. In some institutions basic changes have occurred; in many, little has been accomplished; in a number, the philosophy of general education is still unknown; in a few, it is anathema to a significant proportion of the faculty. Several institutions — Columbia University and the University of Chicago, for example — developed the basic concepts of general education about a quarter of a century ago. Not long thereafter a few others launched similar programs. Considering the many and varied institutions which make up our system of higher education, however, it can be said that the development of an adequate program of general education for the nation as a whole is only in its initial stages.

It is, nevertheless, heartening to observe that significant advances can be made in a relatively short time, even in institutions with strong academic traditions. In Harvard College, for example, where a program of general studies was inaugurated only two years ago, many excellent general courses are already being taught. These courses which differ fundamentally from conventional instruction in the various disciplines are offered by some of Harvard's most distinguished scholars. Even though faculty members offer them, and students take them voluntarily, they have been popular beyond all expectation. A carefully conducted questionnaire study shows that the overwhelming majority of students who attended general courses at Harvard last year found them stimulating and profitable, often more so than the usual systematic instruction in the same fields. Evidence of their satisfaction with this new instruction is to be found in the growth in enrollments which more than tripled in one year (500 to 1800) in spite of necessary limitation of registrations in some classes. This dramatic development at Harvard is not typical, but it may be expected that programs of general studies will develop more rapidly in the future than they have in the past.

What direction these developments will take cannot be easily predicted. There are almost as many varieties of general education courses and programs as there are institutions. In spite of this diversity, however, certain trends and common features are observable. Without attempting an exhaustive list the following may be mentioned.

One significant trend is the increase in prescribed subject matter. In the attempt to broaden the student's understanding of the world in which he lives, additional studies in the various fields of knowledge are being required. The specified subjects vary from one extreme at St. John's and Chicago where all students pursue common courses, or at least take examinations in them, to the other extreme at Harvard College where many general education courses are offered but none is required. Somewhere between these two extremes a more common pattern of general studies is developing, covering from forty to fifty semester hours of work for all students regardless of their major or vocational objectives.

This common core of studies customarily includes prescribed instruction in the social sciences, the humanities, the natural sciences, communications, foreign language, and physical education. Often, however, these larger areas of subject matter are split up into less comprehensive subdivisions in each of which requirements are imposed. Take the sciences. In some institutions, the University of Iowa, for example, an eight-hour general course in the natural sciences is required, but this course may be either physical or biological

science. At Northwestern University and Antioch College, on the other hand, where these two fields are not considered equivalent, courses including the subject matter of both the physical and the biological sciences are specified. Mathematics is sometimes made an element in a required general science course; often it is a separate requirement, but in few is it allowed as an alternative to science.

The subject matter in general courses in the humanities exhibits a similar variation. Many include only literature, philosophy, and history; art and music form a separate division. In an increasing number of institutions, however, the fine arts are included in the humanistic disciplines, and indeed are sometimes integrated with literature and philosophy. But even in institutions with outstanding departments of fine arts and excellent general courses in art and music, instruction in these fields is often not required, which indicates that the fine arts are not yet considered an indispensible component of general education. There is evidence, however, that this attitude is swiftly changing. Most future programs of general studies will probably include either a required course in fine arts, or an integrated course in the humanities embracing literature, philosophy, and art.

Striking developments are also occurring in the teaching of communications. Conventional courses in English grammar and rhetoric with exercises in writing themes and papers are still common. In a growing number of institutions, however — the University of Florida, the University of Iowa, and Michigan State College, for example — the conception of communications has been greatly broadened to include units of instruction on speech, reading habits, how-to-study techniques, the nature and development of language, semantics, and the logical organization and presentation of ideas. Clinics and laboratories are provided for those with marked impairment or ineptitude in the functions of communication. The emphasis has shifted from time served to performance. In speech, reading, and writing a minimum skill must be achieved by the student before he is released from the course. Some faculties consider effectiveness in communications so important that they are retesting students late in the junior or early in the senior year to discover whether correct habits of expression have persisted, and where they have not instruction is resumed. Other institutions have achieved the same objective by requiring every member of the faculty, regardless of his department, to assume responsibility for students' habits of communication throughout his college course.

The recognition that many of the ideas of contemporary life can be expressed only in *quantitative* terms has caused a further broadening of the concept of communications. Mathematics is gaining a more important place in the program of general studies as an essential form of communication. Functional courses in the fundamental processes of arithmetic, algebra, and geometry, often entitled "mathematics skills," have been devised for students of little aptitude. But more significant are the courses intended not for those of low ability, but for average or superior students whose interests lie in fields other than mathematics and the sciences. These students do not need the usual instruction in college algebra, analytical geometry, and trigonometry, but they should be able to think quantitatively. For such students general courses are being developed which bring together elements of mathematics not customarily found in a single college course, such as materials in postulational thinking, the nature of proof, statistics, probability, and non-Euclidian geometry. Of the institutions which have such courses, the University of Minnesota, Haverford College, the University of Florida, Syracuse University, and the University of Chicago should be mentioned.

These innovations in the college curriculum have been cited to show how general education courses are multiplying and changing. As new subject matter is organized and the need for a broader basic education is recognized, it seems probable that a larger proportion of the total college program as well as that of the professional schools will be composed of general studies.

Eventually half of the four-year curriculum may well be devoted to this purpose as, indeed, it already is in some institutions.

As the proportion of general studies increases the question arises — Where in the college program should they be located? This subject is now being very much discussed, not only in four-year liberal arts colleges, but also in junior colleges, and in professional schools, such as engineering and pharmacy, which admit students directly from the high school. Some institutions like the University of Florida, Michigan State College, and the University of Chicago have decided that the general studies should be concentrated in the period prior to the beginning of the third college year. It is reasoned that students should have certain intellectual experiences in common regardless of their major interests, and that these experiences will be most effective if they absorb the student's full energy and concentration before he begins his specialized studies. Furthermore, many students come to college without a dominant interest in any academic or professional field. For them the general program provides an opportunity to find themselves intellectually by sampling the various subject-matter areas. Moreover, specialized study is most effective when it is based upon a broad understanding of the various disciplines and the interrelationships among them. According to this school of thought the student should have learned something about the subjects which constitute the anatomy of modern knowledge before he begins his specialized training.

A second school of thought holds that general education should continue through the entire period of higher education with a large proportion of *general* studies in the early college years and a large proportion of *specialized* education in the later years. The advantages in this arrangement are, first, that the student develops a desirable point of view toward general education, that it is not something "to be got over with" but that it continues throughout life. Second, as Howard Mumford Jones points out in his excellent book, *Education and World Tragedy*, vocational success is a prime motivating factor in education. An arrangement, therefore, in which the student begins his specialization at the very outset, but devotes most of his time in the first years of college to general education, has a distinct motivational advantage over a plan in which specialized or vocational studies are delayed until the completion of general studies. Last, there are obvious relationships between general and professional studies which the student is more likely to see if he pursues both simultaneously.

Though the pedagogical advantages in the study of both specialized and general courses at the same time seem to be clear, certain practical considerations will probably cause most institutions to concentrate general studies in the first two college years. In the first place, the junior college is our most rapidly developing educational institution. Enrollments have grown enormously in the past decade and the increasing interest in junior colleges in small towns will undoubtedly accelerate this growth. If the recommendations of the President's Commission on Higher Education that community colleges be established and supported from public funds were to be embodied in legislation, a large proportion of college enrollments would be in these institutions.

Now there is no reason why, under proper circumstances, junior colleges should not offer advanced instruction. Considering the fact, however, that most of them will be relatively small institutions and therefore unable to afford a broad range of specialized subject matter, and also considering the fact that for many years to come there will be an acute shortage of teachers of specialized subjects, it is likely that most junior colleges will concentrate their efforts in the field of general education, insofar as they offer nontechnical instruction. Moreover, the administrative advantages in having future students in such professions as pharmacy, engineering, and nursing complete their general studies in a college of liberal arts, or a junior college, before they enter the professional school, seem to be weighing very heavily in the minds of those who are revamping

professional curricula. The rapidly increasing enrollments in large universities have caused many administrative officers to suggest that students remain in their home community for a year or two beyond high school and complete some of their general studies in the local junior or community college. These transfer students will have completed their general education in the first two years of a four-year program, and it seems probable therefore that even in the four-year institutions general studies will be concentrated in the thirteenth and fourteenth grades.

Thus far this discussion has been concerned chiefly with the gross structure of the general education program. What are the characteristics of the cells of which it is composed, the courses, and in what respects are they changing? While the scope of the program as a whole has been expanding, the amount of material within the component fields has been contracting. New courses differ strikingly from those of an earlier vintage in the amount and type of material they include. The original survey courses in the physical sciences, for example, included compressed sections of introductory courses. Emphasis was placed on the learning of a large quantity of factual material and technical terminology. The five required courses developed at Colgate some fifteen years ago are good examples of these early efforts to cover a wide range of subject matter in the various major fields of knowledge. This conception of general education has now been abandoned at Colgate and nearly everywhere else.

The newer general courses cover only a limited range of material which is studied with greater intensity. Many students will take only one course in the various areas outside of their major. In such a course of six or eight hours it is impossible to cover even the most general knowledge in the main branches of learning — the physical sciences, the social sciences, and the humanities. Hence selection is unavoidable. Much material must be neglected. This unavoidable reduction in the number of topics studied is not an unmitigated evil, for it shifts the emphasis in learning from memorization to the mastery of principles and the understanding of generalizations. Psychologists have shown that isolated bits of information not tied together in general concepts are very quickly forgotten. But students who go through the process of deriving generalizations or principles retain them for a considerable period of time, and are able to use them under novel circumstances. Moreover students should learn the intellectual methodologies employed by scholars in analyzing and interpreting reality. To do this the student must deal intensively with a few problems to develop the habit of using these skills on his own.

The difference between the older and the newer types of general courses is stated by Dean French of Colgate University, who in comparing the original with the present program at that institution says:

> The five one-semester survey courses together with freshman English are being replaced by seven full-year courses in general education. These are designed to form the essential and sequential core of a college education. . . . The most significant changes, however, are those not easily reducible to paper. . . . One of our most obvious concerns is to direct into college work the natural curiosity of the students who come to us, a curiosity that has often strayed or been driven from academic interests. One way to do this might be to give them the most information in the shortest possible time; a more fundamental way is to whet their curiosity by opening up fields through problems, some simple, some complex enough that the search for solutions challenges mature people and will challenge students on their way to maturity. Instead of dividing a field into its component parts and making an attempt to cover these, this approach would focus students' attention on a selection of concrete problems, and from these lead to the background, the generalizations, the theories involved. . . . This method affects particularly the organization and methods of the courses. It means covering fewer topics but exploring them with more thoroughness.
>
> In natural science this concept leads away from a survey, necessarily superficial, of the highlights of modern achievement to a more careful study of a few problems, in an endeavor to understand what factors contributed to the solution — and how and why. In the social sciences it leads to the consideration of "live" cases, what comes from them, why there is no one solution, what part emotion and bias play, and what can be done through objective analysis of the problem and scrutiny of the background. In philosophy and religion it leads to a consideration of a few

great movements, their origins, why they mean one thing to a student in America and another to a student in India.[1]

This statement of Dean French is typical of the thinking of those who have reduced the scope of their general courses to the bare essentials of knowledge consistent with the understanding of principles.

This emphasis on thinking, subject matter, and ideas might suggest that general education is becoming more intellectualistic. It might be inferred that moral and aesthetic values were being neglected. On the contrary, these two matters — the development of a consistent philosophy of life and the improvement of aesthetic tastes — are receiving increasing attention. With respect to the former, faculties seem less concerned, especially in nonsectarian institutions, about the student's learning a body of ethical or theological doctrine to be used in making moral appraisals of their own actions and those of their fellows, than they are with the development of a set of working convictions around which a life can be integrated. There is less agreement as to how this educational goal can be reached than about any other objective of general education. Where the emphasis is placed upon ethical values and moral conduct rather than upon the development of a total philosophy of life, course material tends to be organized around contemporary moral issues. For example, in a course of this type at Antioch College students were asked to consider the following questions with the expectation that they would be able to defend their answers on the basis of some rational system of ethics:

1. Is it ever justifiable, in advertising, to omit essential truths about the product of service one is selling?
2. Should a teacher be discharged from the public schools if he is a member of the Communist Party?
3. Should a person cut out all expenditures except for basic necessities when his money is needed to feed starving persons in other communities in the world?
4. Are interracial marriages wise?
5. Should there be compulsory arbitration in industrial strikes?
6. Is a person justified in refusing to take military training in time of peace?
7. Should a representative in Congress ever vote against his own convictions in order to represent the convictions of his constituents?
8. What would be an ideal college policy in regard to students' use of intoxicants?

This course obviously does not involve the usual systematic study of ethics or theology, and yet before the course is over the student has read some of the better known treatises on ethics and applied their principles to his own immediate problems.

In other institutions where the purpose of such a course is to assist students in achieving a philosophy of life and in weaving the miscellaneous subject matter of college courses as well as his other experiences into a meaningful pattern, some form of seminar, colloquium, or other integrating experience is often provided in the senior year. Examples of this type of course are to be found at the University of Chicago and at Colgate University where all senior students meet in small groups to consider large philosophic problems and contemporary issues extending beyond the boundaries of a single subject. In a world of confusion, insecurity, and rapidly changing values, many students feel the need for the stabilizing influence of a considered philosophy of life. Much remains to be done in institutions of higher education to assist young people to find themselves spiritually as well as intellectually.

An impressive number of institutions of higher education are now giving attention to the cultivation of the aesthetic sensibilities of their students by including a component of fine arts in the program of general education. Broad courses in art, music, and the drama are appearing in quite different types of institutions, among the larger, for example, Columbia, Chicago, and Michigan State, and among the smaller Allegheny, Sarah Lawrence, and Bennington.

What are the principle features of these new courses in the fine arts? In the first place, they

[1] From a forthcoming book containing descriptions of twenty-three general courses in science, E. J. McGrath (editor), *Science in General Education* (Dubuque, Iowa: Wm. C. Brown and Company, 1948).

are intended to be complete by themselves, depending to a very small degree if at all upon any previous instruction in school or under a private teacher. They rest on the assumption that the student will take no advanced work in the field. In discussing the content and teaching methods in such a course, Lester Longman, a leading art educator has said:

> The instructor should assume that apart from one intensive course, no further studies in the subject will be undertaken by the majority of the students during their college career. Hence, technical and factual information useful to the future specialist, and the acquisition of skills should be slighted in favor of the development of understanding. If prospective major students are permitted to enroll, the same emphasis should nevertheless prevail, since the first purpose of the course is to develop a general understanding of the field as a whole, to serve a cross-section of the student body, to create intelligent audiences for the artist and better American citizens.

There seems to be considerable agreement among the instructors in these courses that the student should be introduced to more than one of the fine arts in order to understand that, though there are various media of expression, there are also certain aesthetic conceptions common to all artistic work. But there are two schools of thought with respect to how this should be accomplished. One holds that a number of the fine arts should be integrated in a single course. Institutions like Stephens College and the University of Florida, in which programs of this type have been in operation for several years, feel that an actual integration of the subject matter has been achieved.

Without giving up the idea of integration altogether, another group of institutions introduces the student to several of the fine arts by requiring a quarter semester in each. Extraordinarily good programs of this type are now in operation at the University of Chicago, Columbia University, and Michigan State College. The last institution attempted an integration of the arts in a single course, but gave up this type of arrangement for one in which painting, music, and literature are offered in separate quarters. It is perhaps too early to say which of these types of organization is superior to the other, but it is worthy of note that in several institutions in which integration of all the arts in a single course has been attempted, this plan has been given up for the other. Before abandoning the composite course in principle, however, it should be remembered that the high degree of specialization in faculties in the field of art, like those in all other fields, probably accounts for the failure of some of the courses which have attempted an integration through the instructor.

The most encouraging development in the fine arts as an element of a program of general education is the increasing emphasis on creative activity on the part of the student himself. Until now only a few institutions have been able to give the student an opportunity to create something which expresses his own artistic impulses and employs his own skills, however crude they may be. Outstanding among the institutions which have made studio work available to students is Bennington College, where courses entitled The Language of Music, The Forms of Visual Arts, and Structures and Style in Dance instruct the student not only in the history and theory of these subjects, but also in the skills of the practicing artist. Similar, though not identical, developments have taken place in Pennsylvania College for Women, Sarah Lawrence College, and Allegheny College. There is unmistakable evidence that the fine arts are becoming an essential component in programs of general studies.

These developments in the field of general education have proceeded far enough to justify the prediction that college education throughout the United States will be basically altered in the immediate years ahead. Many obstacles must be removed, however, before colleges and universities can adequately discharge their responsibilities in preparing youth for intelligent citizenship and a personally satisfying life. The chief hindrances are erected by the graduate schools. No useful purpose would be served by intemperate disparagement of these institutions which are in large part responsible for the pre-eminent position

which American scholars occupy in the world of science and letters. The high standard of living, the physical comforts, and the general well-being of our people are in large measure the result of the application of the specialized intelligence cultivated in graduate schools. That the types of training which these institutions have so well provided in the past for scholars and professional workers should be continued in the future, and indeed enhanced, no thoughtful person would deny.

That these same institutions have not given proper training for future college teachers seems equally clear. Until fundamental changes are made in graduate education it will be very difficult if not impossible to develop an adequate program of general education.

A distinguished dean of one of the leading graduate schools has summarized some of the present weaknesses of graduate education in the following words:

> . . . Primarily, I think, that too many of our products are lacking in breadth of training, are specialized at the expense of wide, humane understanding, and are deficient in integrating their specialization with related and supporting fields and with the larger domains of knowledge and understanding that make up the universe. Moreover, it is said that too many of our students who go to the top level of education are largely or even completely lacking in professional preparation for their tasks and responsibilities as teachers of young people in junior colleges, four-year arts colleges, and universities. It is further charged that too often they are ill-adjusted socially, poorly conditioned for the highly important business of living effectively in constant contact with other people. They are trained, it is said, for specialized research, and yet, as Dean R. G. D. Richardson of Brown University has pointed out, only a minority of the Ph.D.'s go on to other publication after their theses. Relatively few contribute in a scholarly way, beyond their dissertations, save — and the saving is important — as teachers in the classroom.[2]

A few graduate schools are beginning to recognize that a somewhat different education is required for college teachers from that required for research workers. Syracuse University and Michigan State College have launched new programs in the social sciences leading to the doctor's degree which provide special training for the responsibilities of college teaching. Very recently the graduate faculty of Harvard University authorized a similar program, admission to which will be limited to very superior students who intend to devote their lives to college teaching. The following official statement from faculty minutes shows in what respects this program differs from that leading to the traditional Ph.D. degree.

> This Ph.D. in Social Science is offered as a result of the apparent desire on the part of many institutions and of many prospective students for a type of training which will prepare doctoral candidates for teaching positions for which programs now available are not entirely suitable. . . . To be fitted for the task of teaching in General Education or in Social Science courses, he may be benefited by teaching experience acquired during the course of his doctoral training in which he also, of course, must demonstrate a capacity to engage in scholarly research.
>
> . . . The program of each candidate should contain three fields offered within *one* of the following Departments: Economics, Government, History, or Social Relations, and three *additional* fields distributed among related departments, ordinarily with no more than one field in each.
>
> . . . There will be a general examination on four fields of study, two in the discipline of major interest and two in other disciplines.
>
> . . . The thesis, dealing with a topic or problem which does not lie exclusively within any one Social Science discipline, *may* be submitted in two related parts, one part consisting of an original contribution to knowledge in which a mastery of research techniques is evident, the other part being an interpretative essay demonstrating the candidate's ability to synthesize and criticize a body of material drawn from various segments of the social science area.
>
> . . . Candidates for this degree will be expected to attend informally undergraduate courses in General Education and to acquire teaching experience either at Harvard or elsewhere during the period of their study.

There are other evidences of concern about the graduate training of prospective college teachers. The American Association for the Advancement of Science has appointed a committee to consider this matter under the chairmanship of Professor Lark-Horovitz of Purdue University. This committee, representative of the various fields of science, will consider ways in which the present

[2] Theodore C. Blegen, "The Graduate Schools and the Education of College Teachers," *The Educational Record*, XXIX (January 1948), 13.

graduate program should be altered to suit the needs of college teachers and work out plans of cooperation with the colleges in which these teachers are to serve. The Hazen Foundation recently sponsored a conference of persons representing both graduate schools and liberal arts colleges at Lake Mohonk to consider needed reforms in the training of college teachers. A small committee of this larger group was appointed to make concrete plans for a cooperative project for the training of college teachers and to seek support for this purpose from one of the foundations. The University of Chicago has also called a national conference at which similar matters will be discussed.

Within the scope of this statement it is possible to sketch only in barest outline what appear to be the desirable features of a satisfactory graduate program for future teachers of general studies.

First, such a program should include an adequate admissions procedure to identify college graduates who possess the intellectual qualities, the traits of character, and the interests essential to successful teaching.

Second, the program should be organized from the very beginning around the future professional activities of college teachers, and students who expect to enter the profession should be classified with prospective teachers in other fields. Thus a certain professional *esprit de corps* will be developed among all those who expect to become members of the teaching fraternity. They will, and should, look upon themselves as teachers and not as chemists, psychologists, or historians.

Third, only those who have a broad, liberal education should be unconditionally admitted to the graduate school. Some such test as the Graduate Record Examination should be administered to measure the breadth of earlier education. When marked deficiencies in certain fields of knowledge are disclosed, admission to full candidacy for the teaching degree should be denied until these deficiencies are made up.

Fourth, present practices of the graduate school which require or encourage the student to limit his selection of courses largely to a single field of knowledge should be changed so as not only to permit, but actually to require, the student to gain an understanding of related disciplines.

Fifth, the prospective college teacher's ability to express himself lucidly in written and spoken form should be determined and those who are deficient in this respect should be required to take appropriate remedial instruction.

Sixth, all students, regardless of their field of teaching, should be required to gain an understanding of the psychology of learning, the motivation and interests of young people, the characteristics of the college student population, the principles upon which the curriculum is developed, and the place of higher education in our total national life.

Seventh, no student should be permitted to leave the graduate school for a permanent teaching position until he has served an internship under a qualified teacher involving observation of superior teaching and practice in the classroom.

Eighth, at the conclusion of this program a certificate should be issued, indicating that the student has not only mastered the subject matter which he expects to teach but that he also possess the skills of the profession.

An excellent statement concerning the education of college teachers which should be read by graduate deans and all others who have responsibility for such programs is available in a recent issue of the *Junior College Journal*.[3]

Another obstacle to the development of general education courses is the lack of appropriate teaching materials. Many of the textbooks in the various fields of knowledge which treat subject matter systematically for those who intend to go on in the field are not fitted to the needs of the general student. Many new general courses draw materials from a wide variety of sources such as texts, periodicals, newspapers, encyclopedias, and other books of reference which the average in-

[3] Ruth E. Eckert, "A New Design for the Training of College Teachers," *Junior College Journal*, XVIII (September 1947), 25-33.

stitution does not possess in sufficient quantity. Since general courses customarily enroll many students, the financial investment required to provide these materials for large classes lies beyond the resources of most institutions. The increasing practice of teachers of general studies to require the student to read some of the great masterpieces is also imposing a heavy burden on library facilities. To some extent this problem is being solved by the issuance of very cheap editions of original works, or collections of them in relatively inexpensive volumes. It will probably be some years before an adequate supply of texts and other reading materials will be available, but it is encouraging to observe that many teachers are now preparing mimeographed material both of original sources and of their own writings which sooner or later will appear in the form of published books.

Another barrier to the development of an adequate program of general education is the present preoccupation of faculty members with heavy teaching assignments and other responsibilities incurred by large enrollments. The development of new courses of study even of the conventional type, requires many hours of planning, talking with colleagues and with students, gathering new types of teaching material, investigating the possible use of teaching aids, and making a continuing evaluation of the course as it develops. To do all of these things is time consuming, and unfortunately administrative officers are often unaware of the amount of time and energy that must be expended in basic curricular revision. They would undoubtedly find that much of the resistance to new courses of study would disappear if such proposals were accompanied by relief from other duties. Any faculty member who is given primary responsibility for the development of a course in one of the broad areas of knowledge should be relieved of all other teaching responsibilities while he is at work on such an assignment. Where such an arrangement has been made, a much more sympathetic attitude toward general education and better courses has resulted.

And, lastly, the improvement of programs of general education must in some measure await the development of better examinations. Many of the objectives of general education are stated in terms of characteristics or qualities which are not easily measurable. At least the instruments of evaluation now at hand are inadequate for this purpose. It is relatively easy to evaluate the learning and the retention of factual material. To appraise the student's ability to think critically or to exercise the skills in one of the fine arts is, however, a much more difficult task. Until such tests are available it will not be possible to determine the extent to which the objectives of general education are actually being achieved, and until this is possible one opinion as to the validity of certain educational policies and practices is as good as another. In some institutions, notably the University of Chicago and Michigan State College, staffs of examination experts have worked cooperatively with members of the faculty in the development of superior testing instruments, but the average institution does not at present have the resources of staff or money to do this. And unfortunately many examinations are nonnegotiable because of variations in institutional purposes, course objectives, teaching methods, and students.

These, then, are some of the current developments in general education and some of the factors which retard further advances in this important unit in our system of higher education. The general education movement is something more than an academic interest of pedagogues and philosophers. It is that to be sure. But it is more. It is the realization of a long-cherished ideal of all Americans — the full and rounded education of all our people for the responsibilities of citizenship in this democratic nation, and *now* for the awful burdens of leadership in a world in which conflicting political ideals and different ways of life may soon join the issue. Never before in our history have education and destiny walked so closely together. Institutions of higher education bear much of the responsibility for cultivating the traits of mind, and of heart, and of spirit so crucially

needed if intelligence and good will are to prevail in the world. The general education of all the youth of the land, and of adults as well, for these responsibilities is the most important task which the colleges and universities now have before them.

The Columbia College Colloquium on Important Books

BY ALAN WILLARD BROWN

FEW QUESTIONS are more alive in discussions of general education than the debate over the value of undergraduate study of the traditional masterpieces of our Western culture. Even a well-read layman might often think that modern education had only recently discovered that our civilization had a past, and that poets and philosophers had contributed to its patterned fabric more than their names and reputations. But any college graduate of thirty to fifty years ago would testify that the major achievements in literature and philosophy of ancient, medieval, and modern Europe had indeed bulked large in the college education of his own day. Many would complain that linguistic analysis, merely textual reading, and a kind of cultural isolationism had prejudiced or qualified the benefits derived from the study of these achievements. Some would insist that the demands of our industrial and business civilization, together with the vast increase in technological and scientific knowledge, had inevitably replaced this older humanistic tradition, and that in a world of economic self-consciousness and rapid social change the values and criteria of this older, nonindustrial culture were either irrelevant or a counsel of despair. But all would admit that however aristocratic in its appeal and restricted in its general cultural influence, this education produced, not by accident but by vigorous intention, men of vision and imagination, endowed with a sense of moral and social responsibility, and committed to the worth of intellect and the dignity of man.

As secondary and higher education were extended to larger and larger numbers in our population, there occurred a gradual dilution of what had been a concentrate offered to the relatively few. Language requirements were relaxed, training in rhetoric and formal logic was abandoned in favor of more colloquial skills, and the sciences and the social sciences began very properly to receive the attention long overdue in a culture which had adopted the vision of universal literacy and adequate training for civic responsibility. The Renaissance ideal of the educated man as one who knew Greek and Latin first, and everything else after, was slowly inverted, until at the present time we try to give our college students a working knowledge of all the major disciplines and areas of human knowledge by the end of the sophomore or junior year, while classical scholars have become as rare as chemists in the sixteenth century. We undoubtedly need chemists today more than we need classical scholars — there is always an economy of need and value in all educational change — but it remains the philosophical function of reasoning and reasonable man to question the principles of change and to detect any lack of balance which threatens the development of man and the enrichment of his life and culture.

These were the considerations which led Dean Herbert E. Hawkes and others in the faculty of Columbia College to appraise anew, during the years 1916 to 1919, the pattern and function of undergraduate education on Morningside Heights. The impact of war, and the varied experiences of faculty and students during it, contributed largely

to the experiments in general education which Columbia launched in 1919 and which have since, in ways both direct and indirect, so influenced later developments in American collegiate education. This is not the place to discuss the course still called, through all its changes and developments, "An Introduction to Contemporary Civilization in the West," although that course has fathered or stepfathered hundreds of "survey courses" in the social sciences. My concern is rather with the course founded, also in 1919, by Professor John Erskine, first called "General Honors," and since 1932 the "Colloquium on Important Books." For this course has had a similar germinal influence on all courses and programs built around the study of "great books" or "selected masterpieces."

Erskine realized that the relegation of classical studies to linguistic or archaeological specialists, and a parallel process which led to an indulgent sabotage of all modern language study beyond the level of something very dishonestly called "proficiency," had resulted or would soon result in cutting off from their literary and philosophical heritage all but a few college students. "English studies" were already taking the place of these older disciplines and an era of linguistic nationalism was well begun, with the threat of Anglo-Saxon isolationism a real danger. Even the English universities, still the home of educational class privilege, had to devise degrees which American Rhodes scholars were conceivably competent to earn. Classicists and language professors were fighting a losing rear-guard battle, but their strategy was inadequate to the times and their tactics weakened or corrupted by generations of Germanic devotion to minutiae and the heavy curse of the Ph.D. mind. Even in our own day it is often hard to convince language teachers that participation in programs of general education is anything more than a vulgar substitute for their own craft or a *pis aller* which must be accepted in self-defense.

The boldness of Erskine's vision seems less startling with the passage of years, but it is often still necessary to argue its validity with those who insist that without specialized training in their own disciplines the student will acquire an erroneous or perverted knowledge of Greek or Italian or French writers. Erskine, however, was a realist, who felt that some knowledge was better than none at all; that students who lacked Greek should not thereby be prevented from knowing Homer; that Dante and Molière are in many ways as valuable to the American mind as Shakespeare; and that, although true to Pope, "A little learning is a dangerous thing" can be an adage destructive of all intellectual curiosity. He saw that the changes in American education, however inevitable and justifiable, held the threat of denying to our youth a firsthand knowledge of "the best that has been thought and said in the world." With the development of survey courses and near-encyclopedic syntheses there was every danger that literature and philosophy would be treated merely as literary and philosophical history, and that although every high school chemistry student would have produced H_2S, only rarely would the college student know more than a few tag-phrases about Plato, Machiavelli, or Voltaire. Ever since the Renaissance, poets, writers, and scholars had been translating "the classics" into the vernacular and urging them upon an increasingly literate world. Erskine's prescription was simple — to read the important books of our Western tradition in the best available translations, and to read *whole works*, not snippets from the anthologist's scrapbook.

Neither Columbia College nor any other American college was ready in 1919 to introduce a course in world literature and philosophy to be required of all students. For many years the required freshman course in Contemporary Civilization continued to give some historical treatment to the major figures in literature, art, and philosophy, but this was at best a placing of tendencies in a large cultural pattern and it held the danger already referred to as inherent in all survey courses. From the first, Erskine and his friends recognized that the works themselves must

be brought into the consciousness of the undergraduate and his responses to them observed with the aim of determining their true role in undergraduate education. The new course, first called "General Honors," proved from the beginning an interesting experiment and became in time a triumphant success.

The plan was, and has remained, simple: two qualified instructors, preferably from different departments, read and discuss with a selected group of upperclassmen one of the important books in our Western tradition each week during the junior and senior years. In one evening session, of from two to two and a half hours, students and instructors discuss and analyze the book, not primarily as a document representative of its time and place in history, but rather as a living (or even not-so-living) contribution to the great stream of Western culture. Although the books are ordinarily read in chronological sequence, there are no scruples observed as to types and forms: works in poetry, drama, philosophy, and history are read for their own merits as books, and furthermore as books which have their own individual significance and continuing pertinence, whether written in the fifth century B.C. or the nineteenth A.D. During the junior year ancient, medieval, and Renaissance works are read, roughly from Homer through Shakespeare; the senior year is devoted to writers from Francis Bacon to Freud.

This plan, initiated by Erskine, has continued without significant modification throughout the life of the General Honors program and is still carried on under the name, "Colloquium on Important Books." When the upper college curriculum and honors programs were modified in 1929, General Honors was temporarily abandoned. But in 1931 a committee consisting of James Gutmann, Raymond Weaver, and Jacques Barzun (who suggested the name "Colloquium") recommended its revival, effective in 1932. Throughout the history of the course, students who received part of their undergraduate training as members of General Honors or of Colloquium have later become highly effective members of the college faculty and in many cases themselves instructors in the course itself. Colloquium remains one of the most important offerings in the upper-college program, is still the major interdepartmental course in the last two years, and has its own nominating privilege in the granting of honors.

Since 1937, Colloquium has been able to presuppose a preliminary acquaintance with many of the major writers and their works on the part of all applicants for the course. In that year the freshman course called Humanities, required of all students, was instituted, itself an extension of the basic idea of the original Erskine course to the needs of all students in the college. As early as 1935 it had become apparent that the values and benefits of the Erskine plan should no longer be restricted to a relatively small number of highly qualified students, but should be made a part of the over-all lower-college curriculum which was gradually being developed by the faculty. This curriculum anticipated required courses, covering two years, in each of the major areas of subject matter: the social sciences, the humanities, and the physical sciences. When achieved, the revolutionary revision of an earlier science sequence, and its approval and introduction, will at last complete this lower-college curriculum. The freshman Humanities course has been an unqualified success, and deserves separate treatment. However, it must be mentioned here not only as a notable preparation for the work of the Colloquium but as an instance of how Colloquium has affected the entire Columbia curriculum.

All freshmen, with few exceptions, take Humanities (some are obliged to postpone it for scheduling reasons), which is a four-point course, taught in sections of twenty to thirty men by single instructors chosen from a number of departments — English, philosophy, history, ancient and modern languages. The reading list, covering works in literature and philosophy from Homer to Goethe, is exacting for both student and instructor, but the fundamental premise of the Er-

skine course — that all books, important or not, have to be read once *for the first time* — has proved remarkably sound and effective. Any discussion of the Humanities course would have to emphasize the point that many a new instructor, in preparing for the course, is himself often reading a particular book for the first time. It is thus clear that not only Humanities, but our entire lower-college curriculum is as valuable in the training of the faculty as in the education of the student. Objections to the course on this ground seem to bespeak either mistrust of the general academic competence of the American college teacher or a misplaced confidence in the virtues of intensive specialization. Already, as has been true with Colloquium, Columbia College graduates who took Humanities as freshmen are now teaching it as members of various departments.

Colloquium is thus no longer a first introduction to important works in our tradition. It has become instead an opportunity for more mature discussion and analysis by a selected group of qualified undergraduates with a great variety of interests. Many works read earlier in Humanities are re-read in Colloquium. In some cases additional works by authors previously read in Humanities are studied for the first time in Colloquium, but with the advantage of earlier acquaintance and expanded intellectual horizons. Not only because it is an interdepartmental course, but because it is recognized by students as contributing to the art of intellectual discourse which it is the aim of all truly liberal education to continue into adult life, Colloquium has consistently attracted superior students with varied experiences, abilities, and academic backgrounds. Men whose major effort is in physics, philosophy, mathematics, literature, or economics, to mention only a few kinds of student, have found Colloquium a course which serves to create a sense of common intellectual endeavor and a community of experience in some of the most important materials of our civilization.

Professional schools have found that students who have taken the Colloquium come closer to possessing the kind of general background and understanding of social and intellectual responsibility which these schools profess so much to desire, than those who have not had a similar training. And students themselves who are looking forward to the professions, continue to apply for Colloquium in large numbers. Premedical, prelaw, and even engineering students, have found that the course not only answers a need in themselves but helps to expand their professional vision. In more than one medical school, Columbia graduates, together with interested fellow-students, have from time to time held discussion evenings devoted to nonscientific books, conducted in the manner and in the spirit of our Colloquium.

* * * *

Whatever success Colloquium, as an upper-college offering, has achieved is undoubtedly owing to two very important considerations: the choice of instructors and the selection of students. Without a doubt we have, occasionally, made mistakes, and often in the middle of a year we may wonder whether we have really chosen the best qualified and the most deserving students. Our machinery, though simple, works slowly and requires a great deal of common effort. The course is expensive to staff, and because of the limited number of students, expensive to give. It counts as a full course load not for one instructor, but for two, and it usually requires between six and ten hours a week of preparation from each student. Credit is given at the rate of four points (or semester hours) a term, and it is expected that each student admitted will complete the entire sequence. "Riders" of various kinds are occasionally admitted, and sometimes have to be given special examinations and dropped from the course. But the machinery has on the whole worked well, of which the best evidence is that no fundamental changes in procedure have been made in the history of the course.

Colloquium is set up as an autonomous interdepartmental committee under the jurisdiction of the dean of the college. Although the staff is

budgeted by the various departments which contribute instructors, the dean may make special budget arrangements in certain cases and his office bears the minor petty-cash costs of operation. He appoints an executive officer who functions in some ways as a departmental executive. His is the primary responsibility, after discussion with his own staff, the dean, and departmental officers, for the selection of instructors. He is ordinarily himself an instructor in the course. He arranges with the staff for the preparation and mimeographing of reading lists, is in charge of grades and reports, and usually "presides" at interviews and oral examinations. The staff consists in most years of eight instructors, two for each of four sections, two in the junior and two in the senior year. An effort is made to have, in each section of Junior Colloquium, at least one instructor who is a member of the department of Greek and Latin. Other instructors come from the departments of English, philosophy, history, modern languages, occasionally economics, and recently mathematics. In some years the staff has elected to dine together regularly before the evening meeting, and always the members of the staff are in frequent touch with each other about their common problems. But as with our other interdepartmental courses, a maximum of individual freedom and responsibility is left to each pair of instructors.

The proper "pairing" of instructors is one of the tasks of the executive officer, but experience and personal preferences usually produce good teams without much administrative interference. One minor difficulty results from the fact that students almost invariably prefer to be with an experienced pair of instructors and are often chary of new ones. But since the final placing of students is in the hands of the executive officer, and turnover in the staff is relatively slow, this is not often a serious problem. One team served continuously for twelve years, and others have often worked together for five or six. Ordinarily, only calls to other institutions or the pressure of departmental demands upon distinguished teachers break an instructor's connection with the course — a further tribute to its effectiveness.

Every April, during preliminary registration period, between fifty and ninety well-qualified sophomores apply for admission to Colloquium for the following year. Since only thirty can be admitted, a weeding-out is necessary. Early in May a committee of three to five members of the Colloquium staff (varying to suit personal convenience on different days) interviews each of these applicants for about fifteen minutes. Notes are made and a letter "grade" assigned to each applicant, although the interview is intended to be a conversation rather than an examination. The criteria of judgment are: past academic performance (each student's record is before the interviewers), seriousness of purpose, discursive ability, and breadth of literary and intellectual interests. We prefer students with competence in one or more foreign languages, but do not require this, and we are even more interested in the promising physicist than in the mere dilettante of letters. We try to find out something about the man's reading habits and the quality of his mind, often using books previously read in the Humanities course, or even modern best sellers, as starting points for the conversation. When all the interviews are completed, the executive officer, with the assistance of one or more members of the staff, makes the final selection. In questionable or ambiguous cases he often consults with the man's advisers and his previous instructors. Teachers of Humanities in particular often recommend the course to their most promising students, and these students to the executive officer of Colloquium. If there are vacancies in Senior Colloquium because of early graduation or other reasons, properly qualified men are admitted to Senior Colloquium without the prerequisite of the junior course. But although each section of Junior Colloquium has fifteen students, we often try to keep the senior group as small as twelve.

Before the first Wednesday evening of the fall term, section lists are posted and the first reading assigned. Sometimes the entire reading list for

the term is also available, but some instructors prefer to discuss the projected readings with their own group at the first meeting. From then on the procedure remains the same throughout the year: discussion is initiated by a question from one of the instructors, or even one of the students, and the book of the week is launched. Early discussions are likely to be tentative, much of the burden may have to be carried by the instructors, and the group as a group may appear to have no unity of direction or purpose. But within a few weeks it acquires a corporate vitality and its members begin to propose and defend their own interpretations and opinions. Social and intellectual "character" becomes manifest, sides are taken, and the process of understanding what can be learned from this great variety of literature is well begun. Each team of instructors develops its own techniques, and in time each section comes to be known for its particular qualities.

At one time a preliminary lecture by a member of the staff or some other faculty authority was offered during a daytime hour, but this was dropped about eleven years ago as unnecessary in consequence of other developments in our curriculum. Similarly, the practice of a spot-identification examination twice a year, to check the care with which reading had been done, was abandoned in the light of the proven maturity of those admitted to Colloquium. The requirement of three or four short critical papers each term, or one longer term paper, has, however, been maintained, although instructors create their own patterns and prescriptions for this important contribution to the work of the course. These papers are expected to be critical and personal, not historical rehashings of secondary materials; they should be concise, well argued, and well written. They are not graded (as far as the student is concerned), but they are fully commented upon by both instructors, discussed with each student, and may have to be rewritten if they do not meet acceptable standards.

There are no written examinations in Colloquium, and for the satisfactory student the sole final requirement is an oral examination at the end of each year. This examination is conducted by four to six members of the staff, including the student's own instructors, at least one instructor from the second section of his year, and one from the other year of the course. The student and instructors sit around a table, and the examination lasts half an hour. This may not seem a formidable requirement, but to the student it is usually one of the most demanding (and memorable) ordeals of his college experience. Some examinations are more skillfully conducted than others, good students do not always do well, and poor students may get a lucky series of questions. But here again we feel that the method has proved itself adequate over a long period of time. Furthermore, it gives to the student who is continuing with graduate work an opportunity to try himself in discourse under examination conditions, which is later invaluable. The student's grade on the examination itself is given him a few minutes after he leaves the room, but his final grade in the course is determined by his own instructors who are the only ones able to judge his total achievement.

Students who are not doing satisfactory work may be given a special oral examination at any time and be asked to drop the course if their performance is inferior. All students in Junior Colloquium must receive a grade of at least B to be entitled to continue in Senior Colloquium. Given the rigorous selection of students, this is not too exacting a requirement, although several students — our mistakes — are dropped each year. Occasionally a student drops the course for his own reasons, but with these rare exceptions those who complete Junior Colloquium successfully continue in the senior course.

One of the most important aids to the work of the course is a printed bibliography, prepared by members of the staff, which was first published as a reading list for General Honors by the Columbia University Press in 1924, under the title, *Outline of Readings in Important Books*. This list has been out of print for many years, but

since 1927 has been published in revised form by the American Library Association in Chicago, as *Classics of the Western World*. The first two editions of the latter work were prepared under the supervision of J. Bartlet Brebner and James Gutmann; the most recent (1943) by the present writer. This bibliography lists recommended readings in over 140 major writers from Homer and the Bible to James Joyce. Each year, the forty-eight to fifty-six readings in the two years of Colloquium are mainly selected from this list, which also includes recommended secondary materials, chosen as much as possible for their critical and historical value rather than for their specialized or scholarly importance. This book has long proved useful beyond the confines of the college and apart from its function as a guide to students in Colloquium.

Such are the machinery and the procedure of the Columbia College Colloquium on Important Books. No article, however, can give a satisfying impression of what it has meant to generations of Columbia students and instructors. Only a fine dramatic writer or one skilled in philosophical dialogue could render the quality of truly successful evenings, some of which touch greatness. There are bad evenings, and there are ineffective discussions, but in any two-year period the significant and profitable meetings far outnumber the rest. Few at Columbia would sacrifice the course or its traditions.

In spite of many superficial resemblances to other programs of readings in the "great books," it is important to distinguish Colloquium from the more elaborate plans put into effect during the last fifteen years at Chicago, St. John's, and in several ambitious schemes of adult education which have also as their purpose the acquainting of the student with the masterworks of his tradition. The procedure and methods of Colloquium have indeed been widely imitated, and several of the initiators of other programs had their original training in the old General Honors course. Both Mortimer Adler and Richard McKeon at Chicago owe much of what they established at Chicago to their earlier Columbia experience, and Mark Van Doren, who is still at Columbia and chairman of the Humanities group, may well have grounded his faith in the St. John's College program upon his own success as a teacher in General Honors. James Gutmann, who served for many years as executive officer of Colloquium and has continued as one of its most successful instructors, is now the chief administrator of Humanities Jacques Barzun and Lionel Trilling, both still at Columbia, are themselves graduates of General Honors and one of the longest-established and most effective teams in Colloquium. Many others, both at Columbia and elsewhere, have carried the Colloquium tradition into other fields and other subject matters. But it must be remembered that Colloquium at Columbia is only a part, even if an important part, of a very varied and integrated curriculum.

There is not, nor has there ever been, any intention of making the "great books," and the "great books" alone, the core of the Columbia curriculum. It is perhaps for this reason that we have always used the ambiguous but more modest phrase, "important books." Our purpose has been to discover criteria of importance in very pluralistic and undogmatic senses. The course has no metaphysical or critical pattern beyond the individual and joint intellectual patterns of its instructors and students. Variety and difference, if not our watchwords, are our characteristics. And yet we feel that our cooperative venture has succeeded in revitalizing for generations of Columbia men an understanding of what literature and philosophy have contributed to the vast stream of Western culture. This accomplishment is both the *raison d'être* and the justification of our Columbia College Colloquium.

Typical reading lists for each of the four terms of Colloquium follow.

COLLOQUIUM READING LISTS

Colloquium 1 — (Junior Year)

Homer: *Odyssey*

Aeschylus: *Oresteia*
Persians
Suppliants

Sophocles: *Ajax, Trachinians, Philoctetes, Oedipus at Colonus*

Euripides: *Alcestis*
Medea
Ion
Bacchae

Thucydides: *The Peloponnesian War*, Books 1, 2, 3, 6, 8

Aristophanes: *Peace*
Wasps
Birds
Plutus

Plato: *Euthyphro*
Protagoras
Phaedo
Epistle VII

Aristotle: *De Anima*
Politics

Plato: *Phaedrus*
Ion

Longinus: *On the Sublime*

Tacitus: *Dialogue on Oratory*

Cicero: *Offices (De Officiis)*
Pro Archia
Pro Cluentio

Marcus Aurelius: *Meditations*

Diogenes Laertius: *Epicurus* (Book 10 of *Lives of the Philosophers*)

Plutarch: *Lives*, Marcus Cato, Alcibiades, Alexander, Agis and Cleomenes
Moralia, Isis and Osiris, On Hearing Poetry

Longus: *Daphnis and Chloe*

Petronius: *Satyricon*

(Heliodorus: *An Aethiopian Romance*; Dio Chrysostom: Oration 7: *A Euboean History*)

Tacitus: *Annals*, I-VI
Agricola
Germany

COLLOQUIUM 2 — (JUNIOR YEAR)

The Old Testament: *Genesis, Amos, Ecclesiastes, Song of Solomon, Psalms* (selections)

The New Testament: *Matthew, Mark, John*
Epistles to the *Romans* and *Corinthians, I* and *II*

St. Augustine: *The City of God*, Books 1, 2, 4, 8, 11, 13, 14, 19, 22

The Song of Roland

The Nibelungenlied

Aucassin and Nicolette

The Letters of Abélard and Héloïse

Dante: *The Divine Comedy*

Chaucer: *Troilus and Criseyde*

Castiglione: *The Courtier*, Books 1 and 4

Montaigne: *Apology for Raymond Sebond*

Machiavelli: *Discourses*
Mandragola

Da Vinci: *Notebooks* (McCurdy's selections)

Vasari: *Lives* of *Leonardo* and *Michelangelo*

Cellini: *Autobiography*

More: *Utopia*

Roper: *Life of More*

Luther: *Address to the German Nobility*
Concerning Christian Liberty
Ninety-five Theses

Erasmus: *Selected Colloquies*

Marlowe: *Tamburlaine I*
Doctor Faustus

Jonson: *Alchemist*
Volpone

Shakespeare: *Antony and Cleopatra*
Measure for Measure
Troilus and Cressida

COLLOQUIUM 3 — (SENIOR YEAR)

Bacon: *Preface and Plan of the Great Instauration*
Novum Organum, Book I
The New Atlantis

Descartes: *Discourse on Method*
Meditations

Pascal: *Pensées*

Molière: *Tartuffe*
Le Misanthrope
Don Juan
Amphitryon
L'Impromptu de Versailles

Racine: *Andromaque*
Phèdre
Athalie

Swift: Selected readings, as announced

Montesquieu: *The Persian Letters*

Berkeley: *Commonplace Book*
A Treatise Concerning the Principles of Human Knowledge

Hume: *An Enquiry Concerning Human Understanding*
Dialogues Concerning Natural Religion

Diderot: Selections (in the volume, *Diderot: Interpreter of Nature*, published by International Publishers)

Rousseau: *The Social Contract*
First and Second Discourses

Burke: *Reflections on the French Revolution*

Goethe: *Faust*, Parts I and II

Wordsworth: *The Prelude*

COLLOQUIUM 4 — (SENIOR YEAR)

Stendhal: *The Red and the Black*

Balzac: *Cousine Bette*

Schopenhauer: *The World as Will and Idea*, Volume I
Essays: "The Sufferings of the World," "The Vanity of Existence," "Suicide," "Education," "Women," "Noise"

Flaubert: *Sentimental Education*

J. S. Mill: *Autobiography*; "Nature" (in *Three Essays on Religion*); "Liberty"

Dickens: *Our Mutual Friend*

Nietzsche: *Beyond Good and Evil*
Ecce Homo

Meredith: *The Egoist*
Modern Love

Dostoevsky: *The Brothers Karamazov*

Chekhov: *The Cherry Orchard, The Sea Gull*
Stories: "The Darling," "The Privy Councillor," "Vanka," "The Wife," "The Ravine," "The Horse Stealers," "Love"

Henry James: *The Portrait of a Lady*

William James: *The Varieties of Religious Experience*
Selected Papers on Philosophy (Everyman)

Freud: *A General Introduction to Psychoanalysis* (first series of Introductory Lectures)
Beyond the Pleasure Principle

Proust: *Swann's Way*

THE PRESENT STAFF

Junior Colloquium: Moses Hadas, *Greek and Latin*
Andrew J. Chiappe, *English*
Donald M. Frame, *French*
Joseph M. Conant, *Greek and Latin*

Senior Colloquium: Charles Frankel, *Philosophy*
Quentin Anderson, *English*
Richard C. Rowland, *English*
Howard Levi, *Mathematics*

Mr. Quentin Anderson has recently been appointed the new executive officer of the Colloquium.

Colleges and the Future

BY ROBERT M. VOGEL

LITTLE remembered today is the man who was a terror to thousands of men three years ago. Even in his brief glory the publicity he received did not match his importance. For his story might have been the most significant of all the lessons of World War II.

He was the man who would climb into his out-of-date airplane, fly two hundred miles, circle patiently for hours around the target he had selected, and finally dive to a flaming death. He was the Kamikaze, the Japanese suicide pilot, who with hundreds of his brothers made the invasion of Okinawa more costly and more terrifying to the American Navy than was ever revealed.

Too quickly was he buried in the avalanche of momentous news of 1945. Too easily could he be dismissed with vague references to the "inscrutable" Japanese and their strange religion. Yet to explain the Kamikaze we must go deeper, and what we will find is worth the search. The Kamikaze was neither doped nor coerced. We may logically assume from the care exercised by other nations in the choice of flying personnel that he was above average in intelligence and in education. What in this twentieth century, even in Japan, would explain such a man? What would explain the ten thousand such men who, we are told, were being held back until our invasion of the home islands?

The basis was in the Kamikaze's religion; the effect was in his mind. It was a channeled mind, directed at suicide. Here is symbolism which should not be overlooked. Every channeled mind must lead to eventual suicide. And probably to murder.

A valuable public service has recently been performed by George S. Counts and Nucia Lodge. They have translated and edited a modern book designed for Russian teachers. In English the book is monotonous, and depressing because of its monotony. In the original edition this effect must be even stronger. The title chosen for the English version states accurately, as well as arrestingly, the content of the book, *I Want To Be Like Stalin*. Clearly the intent of the book is to prepare the Russian teacher to present to his students the basis for a channeled mind. The student is taught to want to be like Stalin, and like nothing else. There *is* nothing else. The free presentation of fact and the encouragement of free thought have no place in Russian education.

Similarly German education a few years ago might have been summarized in the sentence "I want to be like Hitler." The Nazis succeeded in giving to Germany a channeled mind, and all too clear are the consequences of that channeling to Germany and to the world. Suicide and murder.

Our usual hasty analysis of the case of the Kamikaze, the Russian, the German, is absence of freedom. We acknowledge quickly the dangers of the channeled mind, and prescribe freedom as a solution. We forget that we have freedom in America, and even with it dangerously channeled thinking.

One public opinion poll after another has revealed the prevalence of two conclusions Ameri-

cans have reached: a third world war is inevitable; an economic depression is inevitable. The meaning of inevitable cannot be separated from the meaning of apathy. When we decide that anything is inevitable, we have become apathetic. We have decided that man no longer has control over a certain aspect of his destiny.

This, in our culture, in our democracy with its freedom, is the perfect counterpart of one portion of the Kamikaze's religion in his culture. We are voluntarily closing a part of our minds. We are voluntarily channeling our thinking. We are keeping open only that part of our minds which allows us to live in complacency. Ours is becoming the way of resignation. Unchanged it will become the way of suicide, of murder.

What is apathy? How is it manifest? For over two years we have observed it in the frantic scramble for automobiles, for, in fact, any luxury not readily obtainable. In our demand for escape novels, escape plays, escape movies. Apathy had much to do with the creation of a black market at the war's end. On a higher plane it is manifest in the pussyfooting of politicians on almost every issue. Since 1945 problems affecting vitally the survival of the world have been subordinated to the November election in 1948. It is remarkable that the man who at this writing is considered to have the best chance to receive the Republican nomination for President is in that position despite the fact (or because of the fact) that he has refused to take a stand on a single issue of national or international importance.

Highest of all, and most discouraging, has been the evidence of apathy in our complacent return to the mumbo-jumbo of international diplomacy. Witness the loan to Greece and Turkey. Witness the Marshall Plan. In both instances we have ignored the United Nations, because that organization is powerless. That is the simple fact. Yet we are trying to assure the world, and reassure ourselves, that we have done no such thing. Here is the ultimate apathy, when we try to make ourselves believe we haven't done what we have done. We have dramatically demonstrated the inadequacy of the United Nations, but we wish it were not inadequate. Our solution is to deny its inadequacy, and by repetition to restore our phantasy.

But is this apathy? What, again, is apathy? It is lack of imagination, nothing more. Apathy is the blind acceptance of whatever is easiest, and the thing that is easiest is that which we have known in the past. It is doing what we are accustomed to do, whether experience has shown it to be good or bad, true or false. It is the ignoring of many problems, to concentrate on whatever most excites our attention. That is apathy, and it rules our lives today.

Imagination, we have said, is the answer. It sounds easy, but imagination is really difficult. It is not phantasy, not daydreaming. The kind of imagination we need is that which is the basis of creation.

For there is the solution. The world progresses only so fast as it creates. The solution to each problem is a creative act, is the result of studious use of imagination. Even the so-called "accidental discoveries" from America to x-rays and radar resulted from, or would have been put to no use without, imagination.

The United States is an excellent example. To meet a difficult and dangerous situation, a government was created. Despite distances between states greater than remain in the world today, despite language barriers, economic barriers, and wholesale apathy, men of imagination created a government! They created steamboats and transcontinental railroads, a postal system and a national bank, mass production and antitrust laws, a public health service and the atomic bomb.

We imagine, and then create. The result is a fact, which becomes a bit of history. Progress is made. Never again will that same creation solve a problem. By the fact of its creation, the world has been changed. The problems now are different, and require new creations. History should teach us two things: (1) what the creations of the past have been; (2) that they *were* creations. If we learn the second, we will understand the first. When we fail to learn the second, we close

a part of our minds. Apathy is next, and the Kamikaze a step beyond.

"Learn," "understand" — here is where we must begin. It is not unlikely that the most hopeful single portent in our apathetic world is the enrollment of over two million men and women in American colleges and universities.

The difference between the Kamikaze and tomorrow's world citizen is in their thinking. It is the difference between a channeled mind and a creative mind. In this country two million men and women are asking to be taught how to think. They represent the nucleus of the world's chance for survival. The combination of their number and their purpose places squarely upon American institutions of higher learning the responsibility for taking the initiative in the creation of tomorrow's civilization.

No other agency has such an opportunity. The press, the churches, veterans' organizations, pressure groups — all will have a part to play. Yet the fact remains that none, except the colleges, has an enthusiastic membership of two million who are demanding to know the answers, or how to find the answers.

This imposes a difficult problem upon the colleges. They must remember that the problem is also an opportunity and a duty. It cannot be postponed because of material shortages, or an overworked and underpaid faculty. Just as men willingly gave effort, money, pain, and often their lives in the urgent necessity of the recent war, so must sacrifices again be made in the equally urgent necessity of peace. The peace and progress of the world are at stake.

Nor can the colleges naïvely assume that their efforts will consist in the hiring of additional teachers, and the erection of Quonset huts. It will solve no problem merely to expand the present teaching program. The colleges must adjust to the urgency of civilization's struggle to survive. To do so will require that some fundamental changes be made.

First of all, the colleges must re-examine their philosophies, their purposes. This does not imply a re-examination (of which there have already been too many) which will do no more than to reassure the faculties that they should continue to do what they have become accustomed to do. They need to ask, not only whether the founders' purposes are being achieved, but also whether those purposes are today really important. The college whose primary goal is a return to its prewar "standards" has no place in the postwar world. This is apathy in the highest of places.

Those who proclaim that college students must concentrate on the principles that have stood the tests of time are asked: "Are these enough? Are not principles which will apply to all things in all times necessarily abstractions of such high order that they obscure the immediacy and uniqueness of every arising problem? Are not these principles useful as limiting factors, as bases for criticism only, and thus but a part of the total of imagination and creation?"

Conversely, those who would ignore the past are asked: "But from the facts of the past do you not get the foundation for imagination? Do you not find useful limitations in the principles established by man's experience? You, too, see only part of the picture."

And all educators are asked: "Do you train students to solve problems of the distant past, of yesterday, or of today and the unrevealed future? Do you emphasize equally the acquisition of facts and the training of imagination? Look at yourselves carefully before you answer."

To re-examine the philosophy of a college seems an enormous task, and a time-consuming one. Fortunately this need not be true. Basically the problem for colleges and universities is one of attitude. The content of college courses, although subject to many minor variations, is fairly well established. It is not imperative that this be changed radically. Knowledge is largely factual, is a record or summation of the past. But the significance given to factual knowledge is a matter of attitude, and here changes can be made. It should be possible, without greatly altering the content of most courses or the plan of most cur-

ricula, to add to the presentation of knowledge a new dynamic quality.

This can be accomplished by reducing the emphasis on the importance of the knowledge in itself, and increasing the emphasis on the creative origin and creative use of knowledge. It can be accomplished through an increase in the use of discussion and a decrease in the use of lectures and narrow textbooks. Discussion, vital to democracy, fosters creation. From discussion come differences of opinion, imagination of ways to reconcile the differences, and the creation of a solution. A fact so established has a different significance than the same fact stated in a lecture or listed in a textbook. Moreover, the method of democracy has to be practiced. Discussion is slow, but so today are the democracy and the creation it illustrates. The use of discussion will increase its speed, *and* the speed of democracy and creation. The use, or lack of use, of discussion is evidence of the college's attitude toward knowledge and education.

Closely related, too, is the attitude toward research. It can be argued that the end of all research is creation, since it aims at the establishment of new facts. A large portion of research, however, involves no imagination and no creation. Again the emphasis on facts has overshadowed the more important aspects — the use and value of those facts. As a result, research is often accepted as a virtue in itself. As long as something is added to man's store of knowledge it is assumed that the researcher is fulfilling a useful purpose. We should not ask whether an addition to knowledge has been made, but what the addition is. What good will the knowledge serve? The worship of the sanctity of facts is another indication of the college's basic attitude.

The insecurity of today's civilization well illustrates this situation. The physical scientists have shown us how to destroy the world. Neither the social scientists nor the humanists have shown us how to restrain ourselves from doing it. All three groups have been engaged in research, and all have produced much of value. It is obvious, however, that in this one situation the social sciences and humanities have lagged behind. What possible explanation can there be?

The physical scientist is concerned with the facts of nature. He studies what nature provides to determine what it is, how it can be altered, how it can be used. Therefore, he is constantly providing us with something new, with something we didn't know before. Although the facts he discovers may have been under our feet for millions of years, we must await their discovery by the scientist before we put them to use. The physical scientist is always ahead of us. What he discovers today we will use tomorrow.

The social scientist studies man's activity. The facts he establishes can never be new. Maybe we have never heard of them, but they aren't new, because we *did* them. They may in some instances still apply, but essentially they are facts of the past. Behavior cannot be studied until it has happened. What the social scientist tells us today about our behavior is, at best, what we did yesterday. Obviously, then, the physical scientist and the social scientist are not analogous. This is particularly evident when we consider man's behavior in relation to a new discovery in physical science. When the discovery is made the physical scientist's work is completed; the social scientist's is just beginning. Man is helped by knowing how he behaved a thousand years ago and how he behaved yesterday. He would be helped more by knowing how to behave tomorrow.

This does not ignore the valuable guidance of psychologists, sociologists, and to some extent all the other social scientists. Much has been done to help the individual *adjust to* his environment. The discussion here is of the larger social problems — government, economics, health — the *adjustment of* the environment.

But the social scientists may object to something else. They may remind us that their business is prediction. And so it is. Knowing how we have behaved in the past, they can predict how we will behave in the future. But the prediction will hold true only if we continue to behave in

the same way. This sort of prediction makes little allowance for conscious improvement. Taken alone it is fatalistic.

Apathy is an indication of the danger inherent in such a prediction. We are likely to confuse prediction and predestination. We must not stop with prediction. We must not stop with what we will do if we do not change, but must go on to what we *can* do, to *how we can change*.

The humanist is in a third category. He is restricted to no time limit. At various periods of history he has chosen to be concerned only with the past. Often he deals with the present, and on occasion with the future. While the scientist must be objective, the humanist may in contrast be as subjective as he pleases. He may choose the method of realism or of phantasy. He is analogous with neither the social scientist nor the physical scientist.

All three are different, yet all have this in common — they are concerned with living. And they contribute to living only in their creating. They must create for the perpetuation of civilization and the progress of man. This is the justification for their existence.

But each has long been accustomed to behave in his own way. He has often rejoiced in his separation from the other two. "Pure" research and "pure" art were easier that way. Gradually the walls separating the three groups were strengthened, and few found reason to complain. The distinction was recognized. There was a time lag in their activities, but it was never more than an inconvenience.

Today the time lag has become intolerable. Many examples could be cited. The most obvious of them became evident July 16, 1945. That day, when the first atomic bomb was successfully tested in New Mexico, physical science went so far ahead of social science and the humanities that man's existence was placed in peril. In an instant all the problems of the world were made subordinate to this one. In that same instant the time difference among the physical sciences, social sciences, and the humanities became a matter for grave concern. The necessity for a time *relationship* became imperative. The inconvenient time lag had become a dangerous time lag.

Today, after two and a half years with the atomic bomb, this problem is still far from solution. The most vocal on the subject of our behavior with the atomic bomb, the creation of the physical scientists, are the physical scientists themselves. After their creation they heard only a weak voice from the social scientists to whose concern they had been accustomed to leave the behavior of men. They heard hardly a whisper from the timeless humanist. In despair the physical scientists took it upon themselves to try to influence man's behavior. Many have left their laboratories to speak wherever they would be heard, to write books and magazine articles, to publish pamphlets and bulletins.

On the whole this is not to be regretted. A greater awareness of society by the physical scientist can hardly be condemned. In fact, a greater awareness of society by all three groups is basic to the solution of the problem. All needed to be reminded that their ultimate purpose is the continuing welfare of society. One of them, at least, has seen this. When the other two learn all will have an understanding of the relationship necessary with one another.

The atomic bomb is an example particularly useful in that it makes obvious the fact that each group must approach its work with a new attitude. Since the social scientist must follow the physical scientist, society cannot be best served until the social scientist adds to his duties. Not only must he study the behavior of man and make his predictions, but he must give added emphasis to guiding the behavior of man. On the basis of his knowledge, his experience in his special field of study, the social scientist is obligated to do all that he can to help man behave in what would seem to be his own best interests. For example, if man expects the physical scientist to create methods by which to use atomic energy, with equal logic he may expect the social scientist to show him how to adjust himself and his civilization to

those methods *as* they are developed. The time lag must be anticipated.

And the atomic bomb has made it clear that the humanist must change his views. He, too, has a duty to fulfill. With his freedom of thought, and his freedom in time, he must help man to imagine and create. He should help us focus our attention more on the present and the future, and less on the past. He, perhaps, can make the greatest contribution of the three. He can wipe out the time lag.

The humanist is tied by no bonds of objectivity. He can predict whatever he chooses. While the scientist must be primarily concerned with what we have and what we are, the humanist can begin with what we would like to have, what we would like to be. He can reveal the future. He can remind us that, although we must always build on facts, there are still facts to be learned. They are still to be learned because we have still to create them. Too often we forget the part we have in making facts, in creating history. Our destiny will be of our own making. Without guidance from the humanist, we may be condemned to accept fatalism as our philosophy.

However much has been accomplished in these directions, remember, an uncontrolled atomic bomb proves that the efforts have not been great enough. The physical scientist may again in the future be able to do almost all of his work in the seclusion of his laboratory, because he is there creating for the present and the future. But the social scientist and the humanist must spend an increasing amount of time outside their cubicles. More than ever before, these two are called upon to imagine, to create, to recommend, and to recommend loudly. They must change their attitude.

A changed attitude toward research would result in a changed attitude toward teaching. This is what we seek. If research were focused on creating for tomorrow, it follows that teaching would be focused on the problems of tomorrow, and on creation as the method of solving problems. How does this apply to specific courses?

The typical graduate of a college has studied language, history and government, and some science. These are basic in the education of all, and to them may be added a variety of other subjects. But restricting ourselves to these nuclear three, what does the graduate know?

He has studied the English language, and probably another. He can speak and write, but does he know what language is? Is it just vocabulary and tiresome rules of grammar, or is it the prime unifying factor in society? Is it static, or is it a dynamic man-made tool, capable of alteration to fit man's needs and convenience? Has he a well-founded opinion of the part language might play in making secure the future of the world? Is language useful only in argument, or does it achieve its highest value when it is used as a means toward cooperation?

He has studied history and government. Is he fitted to be a radio quiz expert, or a careful analyst of behavior and a creator of history yet to be? Is his conception of the future confined to methods and practices of the past? Does he understand law as the restrictions men may place upon themselves for their own welfare, or has he been content to memorize the names and dates associated with famous laws and decisions? Can he envision a world law, a world government?

He has studied science. Has he fallen into the trap of science to the exclusion of all else? Has he a clear understanding of the dependence of science upon society, as well as of society upon science? Does he know that living is both objective and subjective? Is he as much concerned about the control of atomic energy as about the energy itself? Does he see a relationship between science and morals?

In brief, how much has the graduate learned about imagination, about creation? Has his college education emphasized the accumulation of knowledge as the highest virtue, or has it provided training, too, of the imagination? Two million want both. The continuance of progress beyond our generation demands that they get both.

Knowledge must be presented, but to each fact should be added: "This fact was a creation. Once

it didn't exist. Then someone imagined, and someone created this fact." This attitude toward facts will provide an understanding that, if a solution is to be found to the problem of world survival and afterward to problems of man's progress, these, too, will come as creations.

With this understanding, the problem of world survival emerges with a new clarity. The scientists began with what they knew about atomic structure and what they thought about energy. They imagined, and were able to create atomic fission. It is a fact.

The statesmen have begun with what they know about the dangers of atomic energy, and what they know about diplomacy and politics. They have not imagined, and they have not created. Even the famous American plan for international control, the boldest move any large power has made, coupled as it is to the weak structure of the United Nations, is little more than an old-fashioned disarmament plan in different language. No imagination has been used, and no creation will result. Here there will be no new fact.

From fatigue, from lack of knowledge, but most of all from inability to imagine, the citizens of the world have responded with apathy. They want peace, want it badly, but they literally can't imagine how to get it. The fatigue may pass, and knowledge may be more widely distributed, but until imagination is stirred no creation will take place.

We make much of democracy. We concentrate on two of its characteristics. First, we point with pride to the fact that, although slow, it usually works out well. Then we often get confused, and brag, too, about the slowness of democracy. Now we have the problem of peace. We agree that it must be solved by the use of the democratic method, but we are perplexed because it must be solved quickly. Democracy and speed are difficult to reconcile, but speed is not impossible. It is compatible with democracy.

Speed is compatible when we fully understand the second predominant characteristic of democracy, freedom. But we are mistaken when we infer that freedom is an end in itself. Freedom carries responsibility. Freedom to write implies that we should write. Freedom to speak implies that we should speak. Freedom to think implies that we should think. Freedom to imagine and create carries with it the responsibility to imagine and create.

Speed in a democracy will be present only when the citizens, who are the democracy, are active citizens. Active citizens are thinking, imaginative, creative citizens. They are exercising their freedom. Creation in a democracy is directly proportionate to the knowledge of the citizens and the ability of the citizens to imagine. This is to say that progress in a democracy, and at the moment the survival of democracy, is directly related to the education and the educational attitude which the citizens have received.

How many truly active citizens there are in the United States cannot be estimated, but from the general apathetic attitude it is evident that their number cannot be large. To this minority can be added, if the colleges and universities choose, the two million students enrolled today, and the growing millions who will follow. If the colleges and universities choose to ignore this opportunity, it may not be an exaggeration to suggest that man has lost his last best chance to remain on earth into the next generation. The colleges and universities are called upon to choose immediately between complacency and vitality, between resignation and determination.

We have used but one example, the dilemma presented by atomic energy. The dramatic possibilities of that subject should not lead us to believe that no other example would illustrate this thesis. Equally applicable are the problems presented by America's emergence as a world power, by the existence of two world powers with differing economic and political systems, by the existence of two world powers in a world made one by scientific progress, by the presence of inadequate educational and public health services, by the presence of starvation through a major portion of the world. All of these are problems to be

solved. They should be solved speedily. They are problems presented to the imagination of every citizen of the world. They will be solved when those citizens create the solution.

A new attitude in our colleges and universities — this together with two million students ready to receive it — represents what may be the most practical approach to an active world citizenry, to a lasting peace, to a progressive world.

Ours is the way of democracy, and democracy begins with public opinion. Public opinion today is apathy. A recent poll reports that seven out of ten of us expect another war within twenty-five years. Society is forming its Kamikaze corps. Provided with knowledge, and inspired to imagine, there may yet be time to create a world of peace and opportunity.

Battle for the Books

BY SEYMOUR M. PITCHER

"OPEN THE books, if you wish to be free!" That was the advice of Wendell Willkie in 1944, passionately defending in wartime the traditions of liberal education. The books were not, in his view, for the leisure of the genteel few. All men, he believed, grow wiser and freer if they "measure themselves" against the truly wise and free. It would not suffice, we should infer, that Americans read American books and the books of Mr. Churchill's Western Tradition. They must discover the message of the universal library, which is "the equality of all men" and "the dignity of the common man." They could thus prepare themselves for peace.

In 1948, it still appears that peace must wait upon education. However grim the animosities among nations, races, and creeds in these times, men of good will who share Mr. Willkie's faith in the books must not abandon their convictions. They must continue to believe and to say that our people can be brought to tolerance and a sense of the humanity they share with all men. In the battle for the books that is being waged in our colleges and universities Mr. Willkie's enthusiastic conviction is still heartening.

It was based on what seemed inevitable conclusions of common sense, for Mr. Willkie was presumably innocent of theoretical subtlety. By the conservative academic mind his views were doubtless diagnosed and dismissed as naïve and uncritical, though the universality of literature has been urged from the ancients, Aristotle and Longinus, to the moderns, Goethe, Arnold, and the New Humanists. Mr. Willkie probably intended no reference to that system of reading and teaching — some would call it Socratic or scholastic indoctrination — which we have come to associate with the brilliant Great Books program at the University of Chicago and St. John's College. Certainly he had no desire to propagate logic chopping and quibble catching, for which the methods in vogue there have sometimes been condemned. He obviously thought the books speak for themselves, as the Great Books men maintain; he dismissed the practical problem of teaching.

To college and university professors, suspicious of tradition and logically overscrupulous as they often are, it is far from indisputable that the books should be taught — or read. They are disparaged as a graveyard of error and false evaluation; they cannot be related, it is said, to the problems of the modern world. It is better to read about them — preferably in a textbook by a professor under whom one is studying.

Even in the departments of literature there is hesitation. "There is no one to read the books," says the professor of classics, adding apologetically, "They can only be handled in the original Greek and Latin, you know." Says the professor of modern languages: "Literature is no longer our real concern. We are training students in the essential skills of reading, speaking, and writing. Modern languages are studied nowadays for their practical value. That is why everyone wants Spanish. We are going to do more business — not less — with our good neighbors. Our students want to be able to read newspapers, write letters, carry on simple conversations. They are not in-

terested in the Golden Age of Spanish or any other literature!" We turn hopefully to the professor of English, who will likely say: "I have had no training outside English and/or American literature, fields broad enough after all to occupy a man for a lifetime. As a matter of fact, I am a specialist in a rather narrow period, you must remember, and I do not profess to be a scholar elsewhere. It is with hesitation that I teach in the Core Course, would prefer not to. I do not believe in using literature in translation anyway. It is not literature."

Thus those most fit, one might suppose, for the task disavow responsibility — and fitness — for teaching the books. It is true, most departments of English offer a superficial omnibus course in World Literature, and some departments of foreign languages give grudgingly and without credit to their majors courses in literature in translation. Few institutions provide programs in General Literature leading to a major or to graduate work.

When professors of history and philosophy are asked to assist in teaching the books, they conceive of innumerous objections. Historians, if they think of themselves as devoted to verification of fact, are apt to distrust such manifest interpretation as characterizes many of the great historical syntheses. If they acknowledge the validity of the search for pattern, they will yet be skeptical of the argument that the books should be read for pattern's sake. They must not be studied *in vacuo*, we are told, out of the context of the age which produced them. We cannot know them unless we know how they came to be written. And we must study their influence. Courses in periods are best suited to bring out these matters.

The philosopher, if he is a serious exponent of a private system of ideas, is apt to regard the history of philosophy either with alarm or as concerted substantiation of his views. Thus unsympathetic interpretation is offered as evidence of professional competence or a distorted history of the philosophical books substituted for their reading. The eclectic who finds truth in all the systems but gives himself to none, is often condemned by his colleagues. Of all academicians, the philosopher is least likely to allow the books to speak for themselves. And sometimes one discovers in him that intolerance of the revelatory, didactic, and representational pretensions of the arts — particularly of literature — which characterizes the Plato of the *Republic*.

In the social sciences, when theory is recognized to be valuable as such, the great theoretical treatises are still regarded as indispensable to study in the field. When late theory is considered necessarily most accurate, less interest in older and dissenting views is manifest. In the sciences, ineluctable fact is that the great books of the past are not to be studied as final formulations since our knowledge steadily increases.

Something like intellectual vertigo may ensue in the mind of one who considers these objections. We may continue to suggest that if by the common opinion of mankind there are great books, educated men ought to know them, ought to study them under teachers who are willing to read them for their own sakes, and to talk about their general import for men today.

The books, as Mr. Willkie saw, are, in fact, indispensable to general education, though that is not to say that they are all equally adapted to the purpose. If we can agree in defining literature in terms of its medium and audience as speaking clearly and effectively to men in general, it is apparent that many books in science and philosophy are not literature and hence cannot be used in general education. For some are devoid of stylistic virtue and quite inaccessible. Others demand special and technical knowledge for their understanding which cannot be expected in most men. It is even true that many literary masterpieces — certain books of the Bible, the *Divine Comedy*, parts of *Paradise Lost*, for examples — do not speak to men today without explication and interpretation. If these can be given them by competent teachers, they will be suited to general education.

Legitimate objection has been brought against

the various promulgated lists of great books on this point. People have been encouraged to read Darwin's *Origin of Species* without the complementary knowledge of modern biology and Newton's *Principia* without mathematical training. These books were not written for men in general, and it is absurd to recommend them without aids of any kind to persons who have no adequate preparation for them and who are being offered no assistance in their interpretation.

Teaching by dialectical inquiry, which has become identified with the Great Books program, is an admirable method. By it a student can be brought forcibly to examine his own and a writer's meaning; he has to follow out the consequences of a line of argument. But whereas Socrates, its exemplar, was a man of convictions who directed his questions toward discernible ends, his method is mocked if the teacher lacks principle or scruple. It is a fine endeavor to set out to discover Plato's meaning — in, say, the *Phaedrus* — but after it has been found (assuming it can be found) its significance, one may think, ought to be assessed; otherwise, at worst glibness is produced, at best mere analytical ingenuity. One hears repeatedly the charge that students so trained lack perspective and conviction. It is surely a mistake to suppose that this is the way the books must be taught. And they are being taught by other techniques, as at Harvard. There ought still to be allowance for interpretative teaching; we ought still to hope that teachers may be inspired.

If both the listings of the books and the devices of teaching in the most publicized Great Books programs can be called into question, their sponsors are unequivocally right on one most important matter: the books are to be studied for their permanent and general worth. To believe this is to reject, in principle, the conventional emphasis upon sources, context, and influence — the staples of standard methodology in the teaching of literature. These matters have their importance in the study of great books. They may be used with particular effect in the discussion of second-rate and third-rate books, as illustrated, indeed, by Babbitt's essays on error and heresy in the modern world. In the strictly dialectical method of teaching they presumably will be lost sight of. In explicative and interpretative teaching they may be given their due; that is, their relevance to the meaning and value of the work being studied can be properly stated.

The permanent and general worth of the books depends, of course, upon their truth and upon their aesthetic quality, though whether these aspects may be finally separated on a theoretical basis is an interesting speculation.

The criterion of truth has obvious importance in the judgment of scientific writings. Here, we have admitted, the great books in the history of science are at disadvantage. And, we added, many of these books cannot be used in general education because of their aridity and their presupposition of professional familiarity with the material under discussion. But it may be maintained that their establishment of fundamental principles is worth study for itself. They may be highly instructive for their method and a valuable discipline and exercise for the mind.

In the social sciences, history, and philosophy the great books are not so much factual as interpretative. Theory there, as in the sciences, may be tested for its relation to verifiable fact, but it will usually be found to rest also upon assumptions, particularly assumptions of value. These may be compared with the findings of general and personal experience, but truth, it must be agreed, will rest on conviction rather than final demonstration. In these fields, consequently, the books must be chosen to represent a variety of opinions. *The Wealth of Nations* and *Das Kapital* will be studied for economic theory. Plato, Aristotle, St. Augustine, Machiavelli, Rousseau and the rest for political theory. Thucydides, Gibbon, Spengler, Toynbee for historical synthesis. Everything in philosophy from logical positivism and pragmatism to classical idealism. In these studies the student must be encouraged to value theory for its conformity to fact but also for its own sake — that is, for its comprehensiveness in a

realm in which absolute validity is yet unattainable. Here particularly the student must be warned against that hatred of ideas which Socrates called misology. He must seek the truth — and want to seek it — however persistently it remains beyond his grasp.

Also the student must learn to penetrate the disguises of truth in old doctrine and myth. When he reads Plato's *Phaedo* he will probably be tempted to reject along with the unsatisfactory argument for the immortality of the soul the argument upon which it is based: that knowledge is reminiscence. A modern Platonist, however, has asserted that our consciousness, being what it is, distinguishes such "categories" as form, unity, plurality and quality, without indoctrination or education in an environment. These, he alleges, are given concepts, known at the dawn of consciousness, to which as child and man we constantly thereafter revert. If this is true, why is it true? We do not, I suppose, know, but the mystery Plato attempted to explain in terms of the divinity of the soul. My point is that though Plato's explanation and description of innate ideas may be wrong, he has isolated a fact of experience worthy of more sympathetic analysis than it has sometimes received. And it may be possible to state the matter in a way which will suggest there is more truth in Plato's position than error.

Again, if *Genesis* is the book for study, it is apparent that it is not, by and large, a history of events as they actually occurred. But the narratives of the patriarchs and the myths of the opening chapters (the Garden of Eden, Cain and Abel, the tower of Babel) have very great symbolical significance; they have an important relationship to general human experience. Their truth lies in that fact.

If the *Nicomachean Ethics* or the *Gospel of Luke* are the texts, no man can afford to be indifferent to their ethical teachings and their relation to his own life — quite apart, in the case of the Gospel, from its implications for theology. Everyman must estimate the conformity of these teachings with what is in general best for him, he must estimate their truth in terms of his own experience. And there is the further and important question of their general truth for men.

With a work of deliberate fiction, like *Hamlet*, the problem is in some ways easier. Freud, indeed, contends that this story of a man and his "uncle-father" and "aunt-mother," like the Agamemnon-story and the Oedipus-story, is everyman's. Whether or not this be true, the play, as a presentation of human action, passion and thought, is valid in the theater as probably no other has been. That fact should make us hesitate before joining those who see it and all works of art as merely factitious; *Hamlet* is a means by which men relive some of their finest experiences or fulfill their potentialities for them.

Truth, then, though apparent in many varieties and degrees, is always a criterion of the greatness of books. I have suggested that aesthetic quality — that is, formal perfection — is also a criterion. In a certain light, indeed, the criteria of truth and form turn out to be identical. For even in the sciences truth may be maintained to have primarily an aesthetic value; of course it has also secondary values, for good and evil, in terms of its pragmatic consequences. Do we not, in fact, commonly mean by truth the actual relationship of things to each other? And is not perception of that relationship an aesthetic (as it is an intellectual) experience?

However that may be, the books are formal constructs of the human mind. They are valuable as they conform with the actual relationships of things. It is true, formal constructs sometimes possess an illusory value, which is dissipated upon the discovery of their falsity, but spurious formulations may sometimes be admired for their ingenuity and magnificent wrongheadedness is often to be studied, to be refuted. The book is great which presents its materials in their proper and actual relationship, as the experience of men defines that relationship. In the ultimate sense that only is proper which corresponds with actuality.

This matter may be approached less abstractly

by a consideration of the formal values of painting. We are quite able today to enjoy as art the oldest paintings — the work of cavemen — as throughout history we enjoy the graphic art of all manner of races and climes. That must largely be because man's appreciation of shape and color — of form, that is — remains unaccountably and essentially constant through time. In what sense can painting be said to represent truth? For the immediate argument, it has truth in so far as its presentation of form is good, in so far as it corresponds with our sense of formal perfection — things in their proper and actual relationship.

The formal arrangements of sound which appeal to the Kurds, the Hindus, and the Chinese are different from those familiar to the Western ear, though of course within our immediate tradition we have our disputes and favoritisms. The ear, we conclude, is less tolerant than the eye and more squeamish; the experience of music is more intimate. Does this not really mean that the ear judges formal relationships more accurately than the eye, that in that sense it is more sensitive to truth? One may suppose that the many scientists who prefer music to the other arts find in it a superior formal perfection. As for the relativity of taste in music, is it not often due, in the case of foreign modes, to unfamiliarity? Can it not largely be overcome by patient and unprejudiced hearing? This is not to say, however, that some forms will not continue to be preferred to others by intelligent critics for their closer correspondence with a hypothetically perfect formal structure.

Now the books, as works of art, also convey significant and valuable form. In so far as they give us visual images, like painting and sculpture, and organized sounds, like music, they resemble but are less successful than works in these kinds. Chiefly and peculiarly they are constructs of human action, thought and feeling communicated and represented in words. And they are valuable because they give men what they in any case seek — pattern in action, thought, and feeling. The constructs of literature are good and useful if they are true to experience in general, the experience not only of men here and now but of men everywhere and always. The permanent and generic in human nature are, indeed, the essential material of art, not the ephemeral problems of this or any other day. They are the formative principles of art, the source of its timelessness and catholicity. And these facts account for the worth of literature. If all men will not agree to this proposition, it remains nonetheless true that as they do so they rid themselves of prejudice and gain in humanity.

This is why Mr. Willkie was quite right in urging that we open the books if we wish to be free. The books give us the most valuable patterns of human action, thought, and feeling, and as we come to value them, we shape our lives to them; the freedom we achieve is a freedom from chaotic misjudgment and bias, in the knowledge and perception of the good.

As we have said, the books present many patterns. The discovery of possible formal organizations of experience is a fundamental step in the maturing and educating of the mind; it is an essential kind of learning. As we must, for sanity, believe that some organizations are better than others, we must believe that one is, in fact, best. That one best organization of past and potential experience for men in general is adumbrated, one can only believe, in the books, taken one and all together. It is, in fact, the character of literature that it speaks to men in general — that is, to all men in so far as they fulfill their generic potentialities as human beings. As the appreciation of painting and music has greatly increased in America through education, so the books, now addressing themselves to few, may come to speak to more men as through education men become more fit for them.

Whatever objections may be raised against the listings and teaching methods of the established courses in Great Books, there is, then, one consideration which must cancel all cavilling; they present literature for its own sake — that is, for its truth and for its formal perfection. As Aris-

totle said, literature is imitation of life — in so far as life can be communicated and represented in words. Therein lies its great significance; it is man's most effective device for showing the structure of his general experience.

If one holds these facts securely, one is well armed, it may seem, to battle for the books. But, considering the confusion of academic thought about them, it is unlikely that that battle will everywhere soon be won. In some institutions already the school of letters may be taken to symbolize the common interest in literature of professors of the classical and modern languages. Elsewhere departments of general literature have been established in recognition of the neglected fact that literature, whatever its linguistic medium, is a universal art.

But who, it may finally be asked, is trained to teach under such auspices? Most professors of literature think of themselves as historical scholars, frankly and primarily concerned with the sources, social context and influence of books, with facts about books rather than with books themselves. They must be told again and again that the essential context of great books is the human mind in its permanent and generic character. They must be urged to use their scholarship in the service of criticism. In addition to literary critics, men representing a variety of professional interests — scientists, anthropologists, psychologists, historians, philosophers — must also be corralled for the task of teaching the books; their common conviction in the value of the books will be their qualification. It will prove ultimately that they are willing to think as men.

Engineering and the Liberal Arts

BY JAMES KIP FINCH

AFTER many years of discussion and procrastination, schools of engineering throughout the United States have at last come to realize that the problem of making adequate provision for the general education of the young engineer can no longer be ignored. A widespread movement to provide the engineering student with some knowledge of the world which his profession has been instrumental in creating and in which he must live and work is at long last underway.

Although at least two American schools initiated this movement some thirty or more years ago, the attitude of other schools in the past has been that of the amused and condescending but uninterested and unimpressed observer. This situation has not been entirely due to lack of educational interest. It has taken the American engineering profession well over a quarter century to arrive at the point where the American Society for Engineering Education felt professional support made it possible to recognize the need for "a social-humanistic stem" in engineering education.[1] An analysis of the factors which have contributed to this procrastination should be of interest, especially to those schools which are now feverishly but still more or less reluctantly planning "to do something about it."

From the standpoint of the American engineering profession it has been obvious that until recent years there has been no widespread demand that the product of our engineering schools receive more than a good technical training, a training which would prepare the graduate for immediately useful service in an engineering office. While there were a few professional engineers who had been exposed to the liberal arts before taking up their technical studies, and who argued eloquently for the general education of the engineer, the profession was, as a whole, skeptical of the movement and regarded it as directed toward useless window-dressing and as constituting a waste of the students' time. A majority of engineering educators seemed to be more or less in accord with this professional attitude. The American engineering tradition reflected the remarkable achievements of the practical, forceful, pioneering engineer. The idea of culture seemed foreign to this picture of America's technological needs.

Undoubtedly the Engineer's Council for Professional Development has exercised an important influence in bringing about the present changed viewpoint. Organized some fifteen years ago, the Council has sought to raise the status of the American engineer, not only through securing a wider public recognition of his material accomplishments but also of the important part which the engineer plays in modern life and the possible contributions which he may make in solving the economic and social problems of an Engineering Age. In this movement it gradually became obvious that the basic difficulty to achieving these ends was educational. Few engineers were capable of making any such contributions because those who had any real knowledge of modern economic or social problems or any interest in them, were few and far between.

In this connection it is interesting to review the

[1] See "Report of the Committee on Engineering Education after the War," *Journal of Engineering Education*, III (May 1944), 594.

history of this movement in a school which has had some thirty years experience with this problem.

When, in 1914, the School of Engineering of Columbia University, changed its requirements to include education at the college level in English, literature, history, economics, and social thought, the educational philosophy involved rested largely on cultural grounds. Some fifteen or twenty years earlier, schools of law and medicine had begun to require liberal arts work as a prerequisite to admission to professional study. It was argued that engineering had also attained professional status and that the engineer should be, in the best sense of the term, a cultured gentleman.

Mixed in with this idea there was also the argument that the engineer, having been largely responsible for creating the economic and social problems of modern life, should take a leading part in solving them.

It is also unquestionably true that President Butler's influence was a potent factor in the Columbia decision. As early as 1905 he had called attention to the anomalous position which technical schools occupied in the university family.

> The danger consists in allowing the claim that closely specialized work in a purely technical or professional branch, entered upon without any broad preparatory training whatever, is to be regarded as legitimate university work and entitled to the time-honored university recognition and rewards.[2]

Even more important in its influence on the Engineering Faculty at Columbia, however, was the stirring vision Dr. Butler pictured of the place and importance which he felt the engineer of the future was destined to occupy in American life.

Somewhat parallel ideas seem to pervade the thinking of those who are today planning to follow in these earlier footsteps. It is the writer's opinion, however, that none of these ideas are really compelling factors in the modern movement. The cultural desire, however noble it may be, is essentially a matter of pious hope. The thought that the engineer can solve the economic and social problems of the modern world is simply unrealistic, wishful thinking. We cannot expect to make the engineer either an economic, a social, or a political expert. Furthermore, guiding the evolution of an adaptive society seeking to solve the problems of a technological age, is not alone an engineering problem, it is the basic problem of Western civilization.

On the other hand, it has become increasingly clear that the engineer must have a sufficient knowledge of economic, social, and political affairs so that he may make the collective voice of his profession heard in directing economic and social reforms and framing suitable legislation. Self-interest demands that he seek to bring about not only those conditions which will encourage continued technological leadership but which will insure an optimum use of the potentialities for continued progress inherent in technological advances. That nation will survive in the modern world which offers its people the highest security and the highest standards of living which technological progress makes possible. The future of engineering, in which the self-interest of the engineer centers, cannot be divorced from but must go hand-in-hand with our economic, social, and political evolution.

All education is, must be, education for use — if we give a sufficient broad meaning to use. The general education of the engineer is not a mere matter of cultural window-dressing. It is preparation for a career of wider understanding and service. Let us hope that, in the process of securing this basically utilitarian education, the young engineer will not only find those values essential to greater service to his fellow men and his profession but also an interest in the liberal arts as such which will enrich his entire life. Nevertheless, we must admit that our fundamental objective is based on utility and self-interest.

On the educational side there have been probably even more compelling factors acting to retard the general educational movement than these uncertainties as to objectives which have bedeviled the profession as a whole. The major prob-

[2] Nicholas Murray Butler, *The Meaning of Education* (New York: Scribners, 1917), p. 274.

lem has been that of finding time for additional studies.

Engineering curricula have long been overcrowded and exacting. Three groups of studies have clamored for ever greater attention — ever more time and credits. Requirements in mathematics and natural science, especially chemistry and physics, have been constantly increasing. Courses in basic engineering science — engineering mechanics, mechanics of materials, thermodynamics, in the use of mechanical and electrical apparatus and techniques — all these have been rapidly growing in scope and complexity. And finally, the young engineer must be given some instruction in technical applications. He cannot be left with an ever greater collection of tools and no ideas as to their practical application and use. He must have some notion of how to give power to knowledge.

It is in this already overcrowded picture with its constant demands for still more engineering instruction, that we must find a place for the new arrival, general education. There are obviously but two answers: either more time, five years instead of four, or the curtailment of some of this older instruction, long regarded as the backbone of engineering education. Engineering educators have, until forced to do so, been loath to accept either of these alternates. Even today, both plans are being followed. There are those who, unwilling to "sacrifice" any of what they regard as "the backbone courses," have turned to a five-year program for the first or bachelor's degree. Other schools have argued that four years have long constituted the standard requirement, and are "long enough" for a first degree. They have accordingly taken the bull by the horns, so to speak, and made room for the general educational subjects by curtailing the extent of the special application instruction offered in the *undergraduate* program. In our opinion the latter is the proper plan. If curricula are properly designed the only difference between the end product will be that, in the first case, the graduate receives a B.S. or equivalent degree at the end of five years, whereas, under the latter plan, he is awarded the B.S. at the end of four years and receives a master's degree, if he continues his studies, at the end of five.

Needless to say, however, the two plans will not produce comparable products at the end of five years if the procedure which now seems to be dominant in the minds of the five-year advocates is followed. In short, the approach to the necessary curriculum adjustment may make a notable difference in the character of the product.

The five-year argument runs as follows: There is no time for general educational subjects in the older four-year program. We, accordingly, propose simply to add another year to our older program to provide the necessary time. The result is the old program plus the new general education.

On the other hand, the advocates of the four-year bachelor of science degree argue that we have insisted for years that undergraduate programs emphasize fundamentals, that specialization be left to graduate study. Some attention to applications is essential but the main need today in engineering education is not only room for general studies but for increased emphasis on the fundamentals — on mathematics, on basic courses in the related natural and engineering sciences. We have long, they argue, devoted too much attention in undergraduate courses to the attainment of specific technical skills, skills which can be better learned through apprenticeship. Engineering is constantly becoming more highly mathematical; more fully rationalized, less dependent upon empirical procedures — we should be educating engineers not training technicians.

In short, this line of argument begins by recognizing the fact that not only must time be found in the undergraduate program for general studies but that many of the older courses in special applications have no place in a thoroughly modern undergraduate engineering course. It is agreed that practically all the purely descriptive "application courses," many of those which, however important in the past, do not form part of a basic fundamental program today, plus many of the more specialized application courses, should

be omitted from the undergraduate offering. Not only do the general education courses take their place but there must be, paralleling this change in content, a thoroughgoing revision of all courses with increased emphasis on a sound, thorough, basic, a theoretical rather than a highly applied and practical, education. Admittedly the product will not be a competent draftsman, detailer, or designer, immediately useful in a subordinate engineering position. Clearly, however, he will have secured an education which can be supplied in no other way. The graduate can make up omissions in special applications through self-study and apprenticeship. Not one in a hundred can repair through later study a lack of understanding in mathematics and basic natural or engineering science.

Unless, therefore, the adoption of a five-year plan also involves a similar overhauling of the content of the older curricula it will have accomplished only part of the reform of which American engineering education has long been in need.

Assuming that such a complete revision and adjustment has been agreed upon, the next question is, of course, what general studies courses should be offered and by whom?

The last question can be most easily answered and will in large measure also answer the first. We know of no engineering school which has a staff either interested in or capable of offering the general study courses. The answer is, thus, that we must leave this task to our colleagues in the liberal arts college and must, therefore, make use of those courses which are offered by the liberal arts college. Fortunately, liberal arts colleges are now revising their offerings along lines which are almost ideal for attaining the ends which engineering educators have in mind.

It so happened at Columbia that at practically the same time the School of Engineering adopted the general education requirement for its undergraduate students, Columbia College, the liberal arts college of the university, replaced its older classical requirements with a general college course which was ideally suited to our needs. This course has since become known as Contemporary Civilization. It was an outgrowth of the Students' Army Training Corps requirements of World War I days. It developed from the SATC course in War Aims. Offered by a combined staff drawn from the departments of economics, history, philosophy and political science, it stimulated an interest in bringing together these various approaches to modern problems in a single offering. The course attempts a critical study of the background of our economic, social, and political life with particular emphasis on the period since the Industrial Revolution. It has been under constant study and revision as regards content, scope, and methods of presentation. Established in 1917, it answered not only our engineering needs and desires but has been widely copied by other liberal arts colleges especially in the last few years.

Another basic need in engineering education on which there has been universal agreement is improved performance in written and oral English. The older arts college courses appeared to be directed toward literary aims which were within the abilities of few engineering and probably of few arts college students. A more recent college report puts it thus:

> The root of almost all student failures in the adequate use of our language is what seems to us a long-standing error — the separation almost a century ago of instruction in writing in the American colleges from general instruction. . . . The traditional training in command of one's own language as the vehicle of all communication and discussion was replaced by the "teaching" of the language as a "subject," generally with a false and usually unrealized literary aim. The final consequence has been the all but complete disregard of a student's written performance in any courses but those in composition, on the specious ground that his responsibility in other courses was only for "matter," and that the instructor's criticism of writing as writing was an unnecessary if not intrusive niceness.[3]

[3] See *A College Program in Action* (New York: Columbia University Press, 1946), p. 146. This small book reviews the changes which have taken place in the working principles of Columbia College and outlines the modern offerings such as Contemporary Civilization, English, and Humanities.

The new English course is thus planned primarily as a corrective for those students whose performance is not satisfactory. An effort has also been made, as suggested above, to make the use of correct English a requirement in all courses. No engineering teacher would permit for one moment careless or inaccurate mathematical performance in any course. The English problem will never be fully met until similar painstaking care is given to improving the student's use of his mother tongue. On this matter we have, therefore, also found ourselves in full accord with our liberal arts colleagues.

Finally, the arts college has combined in a course known as Humanities A a critical study of a limited number of the world's great books. This course constitutes the third element in the general education program at Columbia. It is not a survey course but a detailed analysis of outstanding contributions in their relationships to the life of their times. It provides an educational rather than cultural approach to literature and literary appreciation.

The question is often asked: "Does not the Engineering School feel that these courses would be even more effective if offered under its own direction rather than under that of the liberal arts college?" As we have already noted, this question is answered in part by the fact that the School of Engineering has no teachers who are prepared to offer these subjects. It is also answered in part by the necessity for reasonable educational economy, by a desire to avoid duplication of effort. These are college courses which meet the needs of both arts and engineering.

All this is not to say, however, that the engineering faculty is fully satisfied with the scope, character, or emphasis of these arts college courses. The engineering faculty would agree with the late Professor A. W. Whitehead that: "The history of mankind has yet to be set in its proper relation to the gathering momentum of technological advance. Within the last hundred years, a developed science has wedded itself to a developed technology and a new epoch has opened." We would prefer that less emphasis, perhaps, be put on the place which ideas have occupied in the evolution of Western life and thought and more on the influence of man's search for greater understanding and control of nature and nature's forces. There are times, we feel, when it would appear that the intellectual reformation, which had its beginnings in the Renaissance with such pioneers of science as Galileo, has far from run its course. Our liberal arts colleagues still seem loath to give up authority and earlier taboos and to accept fully the scientific method of observation and fact finding. We would welcome a wider reliance on statistical methods — the mathematical rationalization of economic and social analysis — and less attention to ideas, viewpoints, and opinions. Yet, after all, we wish our students to become familiar with the way in which the minds of economists and social workers operate. This they can discover only by studying under those who specialize in these disciplines.

It has been remarked that one of the major obstacles to the effective offering of a unified course of studies which involves such widely differing interests as the liberal arts and technology is the fact that liberal arts and engineering faculties are usually alike in several very healthy disrespects. Unfortunately there is much truth in this observation. Arts faculties are apt to regard engineering as being solely a form of vocational training in which the emphasis is on making a living rather than on learning to live a full and abundant life. Engineers have, in turn, not hesitated to make known their feeling that liberal arts courses are worse than useless, that they encourage the student to loaf and fritter away valuable time. The majority of such observations could, of course, be reversed with equal force. Arts courses have been known to be taught in just as narrow, uninspiring ill-liberal a manner as some engineering courses are too often given. On the other side, it may be questioned whether the dull routine of packing a student's head full of factual scientific and technical information is not even more antieducational than exposure to a snap course in the liberal arts.

"Necessary technical excellence," observes Professor Whitehead, "can only be acquired by a training which is apt to damage those energies of mind which should direct the technical skill"; and he adds, "This is the key fact in education; and the reason for most of its difficulties." It is certainly a key fact in engineering education.

The answer to all these slurs and aspersions is, of course, that bad teaching is bad teaching whether it be in engineering or in liberal arts. The engineering educator feels — and we would not want him to feel otherwise — that engineering is the most stimulating and inspiring vehicle of education it is possible to imagine. Nevertheless for the reasons so cogently stated by Professor Whitehead, engineering teaching is apt to become a highly mechanized process of imparting factual information. Engineering teachers take pride in the degree to which they have wrapped up the factual knowledge on which engineering practice is based in neat little packages which the student may put in his tool kit for future use. We speak enthusiastically of the importance in engineering of a constructive imagination and of intelligence — *inter*, between; *legere*, to choose; the ability to discriminate, to discern and weigh comparable values, to make considered choices. But we too often proceed on the cookbook plan of offering recipes rather than seeking principles.

Much is to be gained in both engineering and the liberal arts from the closer association which this new movement is forcing upon us. Engineers are too apt to limit their interests to those problems which give promise of solution in quantitative terms along fully rationalized lines of scientific analysis. The basic idea involved is sound. "Science," says a modern philosopher, the late Professor F. J. E. Woodbridge, "is more than a body of slowly increasing knowledge; it is the proof of a habit of mind; it is the habit of recognizing that there is a rational way of doing things as over and against a passionate, impulsive, instinctive, or partisan way of doing things, and that this way is discoverable through inquiry." Unquestionably we need a more widespread application of this way of doing things if we are to solve, rather than muddle through, the problems of the modern world.

At the same time it is unfortunately true that many of the major problems we face today, including many basic engineering decisions, are susceptible only of a qualitative answer. The mathematics involved is such simple arithmetic, addition and subtraction, the balancing of pros and cons, that the engineering student is apt to regard such problems as unworthy of his attention. Not the least of the values which an engineering student receives from liberal arts training should be a wider perspective, a desire to seek and see all sides of a problem, a conviction that intangible values as well as those which may be reduced to mathematical terms, are worthy of consideration. Liberal arts courses cannot, in general, be so easily mechanized as scientific studies. Well taught, they tend to encourage this wider outlook, to encourage the student to see all sides of a problem.

Yet the engineer, undoubtedly recalling the earlier experiences of his profession in integrating "a developed technology with a developed science," has a feeling that our techniques in economic and social fields are today in a position comparable to that which the engineering profession faced a century ago. Earlier engineering procedures, purely qualitative and empirical in character, were slowly giving way to the more fully rationalized and scientific techniques which give such tremendous power to modern engineering. The older engineers of this transition period resented this "reduction to a science" of the "stock-in-trade" which they had secured through lifelong and laborious experiences. The difficulties in spanning the gap between scientific knowledge of isolated facts, on the one hand, and the application of such knowledge to the complicated variables of practice, on the other, seemed to pose insuperable difficulties. Do we not face a similar situation in economics and social studies today?

There can, we believe, be no question that a more fully rationalized scientific approach to economic and social problems is now in the making.

The basic science back of this movement, as we see it, is statistics. Our colleagues in economics and social science face difficulties in the development of a more scientific, a statistical, approach to their problems which almost exactly parallel those the engineer has been struggling with for over a hundred years. Those teachers who have built up a reputation for unusual ability in recognizing and analyzing current trends are reluctant to accept — indeed they may both lack the special training or be unwilling to face the patience-exhausting labors essential to the application of — modern statistical methods of study and analysis. Much of the data essential to such studies is either incomplete, uncertain or, as yet, entirely lacking. Our census and other source materials are far from satisfactory in scope or completeness. There are a confusing number of variables which must be studied and isolated. The limitations not only of data but those imposed by essential assumptions must be studied in their effect on the validity of results. Finally even statistics itself is a new science in process of development.

On the promising side, however, we have ready-made and at hand a tremendous laboratory for statistical research and the development of statistical methods in the modern mass manufacturing industries. The growth of economic and social *sciences* will be a slow evolution and must come from within these fields — it cannot be imposed from without. But the economic and social worker may learn much in solving these problems from the parallel experiences of his associates in engineering. Closer liaison will be beneficial to both branches of knowledge.

Ultimately, the goal we seek in engineering education is, of course, the integration of the four basic groups of studies involved in the modern engineering curricula into a homogeneous well-coordinated whole. Time was, as we have said, when the relationship of the mathematical and scientific parts of engineering education to the more specific engineering content was far from being as intimate and well developed as it is today. At present we face a similar problem in integrating the liberal arts content of the modern engineering course with the scientific and technical instruction. There is no physical answer to this problem. It will make little difference whether we scatter the liberal arts courses throughout the four years or concentrate them in the so-called pre-engineering freshman and sophomore years. Any plan in which no attention is given in the courses in science and technology to carrying forward the interests and viewpoints developed in the courses in history, economics, and social science, is certain to be sterile and ineffective.

A full answer to this problem will be attained as it was in the past in the integration of science and engineering, only through a slow evolution and broadening of educational interests — an evolution not possible perhaps, until we have developed a new generation of engineering teachers who have acquired some of the understanding and interests necessary to such integration. Of tinkering with curricula there is no end. The objectives we seek demand more than a mere addition or subtraction of this or that course or the introduction of one or two new subjects. The basic problem is one of education. It is not a mere matter of arithmetic.

Editor's Note. The Columbia University Press will shortly publish a small book by Dean Finch on *Trends in Engineering Education: The Columbia Experience* which will deal at greater length with the problems noted in this paper as well as other aspects of modern engineering education.

Wisconsin's Program of Integrated Studies

BY ROBERT C. POOLEY

IN THE fall semester of 1948, the University of Wisconsin is offering, in the College of Letters and Science, a new sequence of studies to be called "A Program of Integrated Liberal Studies." It is a two-year course to be offered at first to three hundred freshmen who will be expected to take the program in its entirety. It is a voluntary alternate list of studies, the completion of which will satisfy the general, nondepartmental requirements of the College of Letters and Science. While it will be open to any freshman who wishes to apply, it is designed particularly for those intending to take the B.A. or B.S. degrees in the College of Letters and Science and those designing to enter, at a later date, the School of Education, the School of Journalism, the School of Law, the School of Commerce, or the Library School.

To understand the genesis of this program some background history may be of interest. In 1945 the faculty of the College of Letters and Science authorized the dean to appoint a committee to study the curriculum of the college and to offer recommendations for its revision. The committee gave particular attention to the program of the first two years, which might be called the general education portion of the curriculum. In January of 1946, the committee presented its report to the faculty. This report consisted essentially of two parts which were labeled respectively "Curriculum A" and "Curriculum B." Curriculum A consisted of several patterns or programs of study formed by the arrangement and allocation of specific courses of the departments of the college to meet the needs of students preparing for liberal and vocational degrees. This portion of the curriculum was largely a revision of existing patterns of studies with the recommendation of several new sequences of courses and the elimination of the course leading to the Ph.B. degree. With minor alterations, Curriculum A was accepted by the faculty of the college and became the official curriculum leading to the B.A. and B.S. degrees.

Curriculum B was a minority report offered to provide "A program of studies at once more general and more integrated than that embraced in Curriculum A." After considerable discussion and some opposition, the faculty authorized the dean to appoint a new committee to study the proposal of an integrated program and to bring a report to the faculty. This new committee, known as Curriculum Committee B, was formed in March of 1946 and presented its report to the faculty in April of 1947. The report was accepted by the faculty of the college and the program was authorized to go into effect in the fall of 1948.

I. THE PROGRAM OF STUDIES

Two important principles underlie this program of integrated studies. The first is that since the goal of general education is preparation for life the courses can be broad rather than concentrated, and can be concerned chiefly with values rather than with techniques. The second principle is that through the exchange of ideas with other students who are studying the same courses at the same time, the average student can profit more from a prescribed course of study for his general education than from elective choices. He

is still free to choose an area of specialization for the latter years of his college life and to select and prepare for a vocation.

The studies of general education are recognized as falling into three large fields or areas. The *humanities* embrace such subjects as languages, literature, philosophy, religion, history, music, and the arts. The *sciences* are biology, chemistry, mathematics, physics, astronomy, geology, geography, and their many subdivisions. The *social studies* include anthropology, economics, political science, and sociology. The integrated program provides a sequence of four courses in each of these three areas. These are new courses, planned to meet the particular need of drawing together the contributions of many subjects, and of relating them to each other to form a meaningful pattern.

The arrangement of courses is as follows:

Humanities

1. Classical Culture. A comparison of Greek culture at its height with Roman culture at its height; readings in translation and some lectures in classical art.

2. Medieval and Renaissance Culture. The transition from Greco-Roman civilization to modern European civilization.

3. Modern European Culture. The literature of ideas and values of England and the Continent (1750-1850) with supplementary lectures on painting, music, and philosophy.

4. American Culture. American literature from 1850 to the present, with supplementary lectures in American philosophy, art, and architecture.

Social Studies

1. Early Man and His Society. How man appeared and how he developed culture, social groups, and religion to adjust himself better to his environment and to his fellow men.

2. Transition to Industrial Society. European agricultural society, and the effect on it of new techniques leading toward industrialism.

3. Modern Industrial Society, U.S.A. Studies of its economy in relation to its political organization and social philosophies.

4. The International Scene. A comparative study of the types of government and economy of the present-day world, with attention to the causes of international cooperation and conflict.

Science

1. Introduction to the Physical Universe. A study of the structure and composition of the universe, the nature of time, matter, energy, and light, with attention given to methods of scientific investigation.

2. Earth Science. The nature of the physical earth as the home of man; its materials, surface features and atmosphere. Illustrations of the methods by which knowledge of the earth has been obtained.

3. Biology. The adaptation of animal life to changing environments and the development of functional variations.

4. Biology; continuation with the introduction of psychology and heredity.

Composition

1. Theory and Practice of Writing. An introductory course in college composition, with essay subjects correlated to the concurrent courses.

2. Nature and Functions of Language. Continued composition, with elementary semantics and language history. Instruction in library techniques.

Students completing the integrated program will have earned 47 credits in general education, plus some 10 to 13 in a language, in mathematics, or in any combination of elective courses. They will have satisfied the nondepartmental requirements of the College of Letters and Science and are qualified to continue in the college with a major in a specific department, or to transfer as juniors into the School of Commerce, the School of Education, or the School of Journalism. After an additional year in the College of Letters and Science they may transfer to the School of Law.

II. THE STUDENT BODY

The curriculum committee which planned the integrated program endorsed the principle of forming a student body representing a cross-section of the College of Letters and Science. So far as voluntary enrollments will permit, this principle will be carried out in the selection of students in each freshman group. If more than 300 apply, the factors of academic level and geographical location will be exercised in the choice. Ideally, each group of 300 students should approximate the college aptitude level of the entire freshman class and should represent proportionally the cities, villages, and rural areas of the state of Wisconsin, as well as a reasonable number of out-of-state students.

In all respects except for the curriculum, these 300 students will be undifferentiated from the general student body. They will live as other students do, in dormitories, rooming houses, fraternity and sorority houses, and in private homes. Administratively they will be members of the College of Letters and Science, and will be registered, tested, and advised in the same manner as are other students of the college.

III. REASONS FOR ADVANCING AN INTEGRATED PROGRAM

Problems arising from existing courses of study

Curriculum change is usually inspired by dissatisfaction with existing courses of study, a dissatisfaction arising from observable discrepancies between the educational ideals implicit in the curriculum and their achievement in the classroom. Educational ideals themselves change with changing social and economic conditions, accentuating the need for curriculum revision to prepare students for the world they are about to enter as citizens and breadwinners. Thus it came about that the traditional, uniform course of studies in early American colleges from their founding to the latter third of the nineteenth century was judged inadequate for the needs of a greatly expanding student body in a changing world, and gave way under President Eliot's leadership to a theory of free election. After the turn of the century a growing dissatisfaction with the unguided and unplanned freedom of the elective system brought about curriculum revisions leading back to some type of plan and order in the sequence of studies, characterized by the fixing of uniform requirements in subjects like English and mathematics, and the grouping of other studies into "fields" with distributive requirements within the groups. In the last three decades, therefore, the general aim of curriculum planning in American colleges has been to make provision for order and significant sequence in undergraduate studies without the sacrifice of some freedom of election.

Current dissatisfactions with the curriculum pattern of American colleges stem from the growing conviction in many quarters that the present plan of minimum specific requirements plus distributive samplings in various fields fails to provide for the great majority of students a purposive integration of experience. The difficulties encountered in current courses of study may be summarized under six heads: (1) The present semielective system calls for a degree of guidance difficult to obtain under existing conditions. (2) For the great majority of students there is no purposive pattern of general education giving significance to the particular courses pursued. (3) Because of this lack of purposive pattern in general education, students tend to find the significance of their courses of study in professional and vocational aims, with a resultant loss of respect for or impatience with the nonvocational courses. (4) Particular courses elected from among a group of departments in various fields fail to create a sense of unity in education, weakening the possibility of seeing the interrelationship and social significance of courses in the humanities, the social studies, and the sciences. (5) Courses required under the distributive system, while originally planned to serve the purposes of general education, often fail to do so because of emphasis upon specific techniques and preparation for advanced courses of a professional and vocational

nature. (6) No systematic approach is provided to the interpretation of life today in significant relationship to life in earlier periods of the world's history.

The preceding objections to current curricula do not apply to all courses of study, nor in equal weight to any particular course of study. They represent a summary of opinions expressed in a wide assortment of books and articles dealing with current collegiate education. Their application to the theme of this paper and particularly to the principles underlying an integrated curriculum will be developed in the following subsections.

Difficulties encountered in the distributive elective system

Vocational vs. general education. There has been no satisfactory solution in American collegiate education to the problem of a proper balance between the claims of education for a rich life and effective citizenship, and the claims of preparation for a specific vocation. That both claims are important will scarcely be denied. The usual course of study today in colleges of letters and science provides for general education by the requirement of a certain number of credits distributed over several fields of study, such as classical and modern languages, mathematics and the sciences, philosophy, the social studies, English and other literatures, and the fine arts. Vocational or semivocational training is provided by the requirement of a major subject, generally in one department, with a specific sequence of studies totalling some thirty to forty credits. Ideally such a program can furnish a well-balanced education with enrichment of life through experiences in a wide range of academic fields and with specific training and professional competence in one or two selected subjects. Such a program, it is claimed, tends to fall short of the ideal for a number of students.

Guidance. The program of distributive elective studies places the burden of making a significant pattern of general education upon the adviser. To guide the student adequately in constructing a program of significant and interrelated liberal courses necessitates intimate knowledge of the student as a person, an accurate appraisal of his capacities and aptitudes, and a firsthand knowledge of the content and purposes of a hundred or more separate courses from among which the selection must be made. In a college where an adviser may devote a considerable amount of time to a few students, there is the possibility of planning for each student an individual pattern of studies which for him will furnish the best approach to general education and the most effective foundation for later specialization. In large colleges and universities, and particularly under the crowded conditions of the postwar influx of students, such personal and intimate guidance becomes impossible. As a result, the student is forced in a few minutes of time, and with almost no help, to fashion a pattern of studies which will determine to a large degree the meaning and significance of his total college life and experience. It is no wonder that unhappy choices are sometimes made, that the scattered and random courses elected add up to no meaningful pattern, and that the provision for general education seems to many students an imposition, a wasteful diversion of his time from the business of preparing for a vocation.

Introductory courses. Under the program of distributive elective courses practically every department of liberal arts colleges offers an introductory course. Some are open to freshmen, some to sophomores, but the purposes are the same: to give a general introduction to the subject, and to lay the foundation for further and more advanced work in the same subject. It is in the conflict between these two purposes that the ideal of general education falls short. Liberal education asks of the course that it present the substance of the subject rather broadly and with emphasis upon the relationship of the subject to other subjects and to other fields of learning. The course should arouse interest, excite the mind, and lead to a new awareness of the subject and eagerness to keep up with it by general reading in postcollege days. Preparation for advanced work in an introductory

course lays stress on systematic organization, the accumulation of specific details, and the gaining of techniques valuable in later courses. Thus it comes to pass that the goals of general and particular education come into conflict in introductory courses, with a tendency for the particular to supercede the general. Hence the student's attention is directed to the subject matter, not from the point of view of its significance to him as a rational human being and citizen of democracy, but as the first step in the preparation for a job. The goal of general education under the distributive elective system frequently slackens into a mere sampling of a number of unrelated vocations.

Common experiences. So diversified have become the offerings of liberal arts colleges under the distributive elective system that for many students the only course shared with all other students is introductory English. This course, while it possesses some elements of general education in the literature readings, has for its principal aim the improvement of written expression, a tool more than an enrichment. Through this diversification the common body of liberal experiences found in the old traditional curriculum of colleges of letters and science has been largely lost. The loss is a real one in that it diverts the attention of the student away from learning to live, to learning to make a living. Nevertheless, specialists, like all others, must live in relationship to their fellow human beings and must share the responsibilities of citizenship and parenthood. Indeed, because of their eminence in their own fields, they are looked upon for leadership and counsel in matters of local, national, and international import. For this aspect of their lives college education should provide something approaching a common core of courses of the kind that teach how to understand the present in terms of the past, how to approach the solution of common social problems, how to understand and interpret the social implications of technical knowledge, and how to find enrichment, stimulation, and recreation in literature, music, and the arts.

Some advantages of an integrated program

Guidance. In an integrated program such as the one outlined above there is no problem of guidance so far as general education is concerned. The program is uniform and except for optional delays in starting one of the sequences, all students pursue the same courses. Advice will still be needed regarding the proper use of the time provided for elective courses, but inasmuch as most departments will indicate the specific courses required for future majors in the departments, the principal decision will be the selection of a department, course, or college of future specialization. In this choice, the student can be guided by conferences with specialists in the various fields and colleges of the university. There are two distinct advantages to guidance by this means: the adviser will be discussing an area with which he is thoroughly familiar from the point of view of making it attractive and interesting to a voluntary applicant; the student can arrange such conferences over a considerable period of time to avoid having to make hasty decisions.

Introductory courses. All courses in the pattern of the integrated program of liberal studies are introductory courses in the sense that they are designed to awaken interest in fields of knowledge new to the students and to stimulate the desire to know more. Moreover, since all the required courses are to a greater or lesser degree interdepartmental, it is possible to focus attention upon comparisons and to develop relationships among and between related subjects and related fields of knowledge. Since no course in the program is planned to be a direct preparation for advanced work in any one department or field, the aims of general education can be kept uppermost; that is, the courses will stress the significance of facts, ideas, and conclusions with relationship to the lives of the students as citizens and parents as well as specialists and vocational experts. Paradoxically, such stress does not preclude the awakening of particular interests and the development of special skills of value in later advanced work. It is generally conceded that converts make the

most enthusiastic practitioners: one of the chief functions of the integrated program will be to awaken through a wide range of experiences in many subject matter fields the particular interests and aptitudes of the students and to provide the opportunity for exploration and comparison essential to a wise selection of an ultimate major field.

Common experiences. One of the principal advantages of the integrated program is the opportunity it provides to give students a common body of educational experience. Granted that there must be a rigid selection of materials to be offered, and that in this selection many interesting and valuable areas of knowledge will be excluded or only partially developed, still the values derived from studies commonly shared by a large group of students simultaneously are unmistakable. In addition to the uniformity of the curriculum, common experiences will be further provided through student groups and assemblies. Students entering the course will be grouped into units of twenty-five, each unit remaining intact for the school year. The students assigned to each group will meet together for composition classes, for discussion sections in the humanities and the social studies, and for laboratory and field trip activities in the sciences. By this device the opportunities for shared experiences in an intimate group are greatly augmented. All the students of the program will meet weekly in an assembly at which, in addition to lectures, recitals, and motion pictures, there will be frequent student forums for the discussion of issues in general education, and for the criticism and evaluation of the program in which they are engaged.

It is this unity in general education which is the desired outcome of an integrated, prescribed program of studies. The courses in nonprofessional education should become interlocking parts of a whole, should add up to something. Each course should be significant to the student not only for what it has to offer him as an introduction to one discipline, but in the light of its relationship to other disciplines. Shared experiences, even though highly selective, furnish the foundation of judgments in relation to an emerging total pattern of learning, as compared with amassing of facts in separated areas of knowledge. Probably no one has stated the ideal of shared and related experience in education better than John Henry Cardinal Newman, from whose *Idea of a University* the following lines are quoted:

> That only is true enlargement of mind which is the power of viewing many things at once as one whole, of referring them severally to their true place in the universal system, of understanding their respective values, and determining their mutual dependence. . . . Possessed of this real illumination, the mind never views any part of the extended subject matter of knowledge without recollecting that it is but a part. . . . It makes everything in some sort lead to everything else . . . the elements of the physical and moral world, sciences, arts, pursuits, ranks, offices, events, opinions, individualities, are all viewed as one, with correlative functions, and as gradually by successive combinations converging, one and all, to the true center.

No faculty or course of study has ever achieved such an ideal for a single student, let alone a large student body. It would be absurd to imply that an integrated program of studies can of itself even approach the achievement of such an ideal. Nevertheless, it is perhaps fair to assert that the uniform and shared pattern of an integrated program provides a setting in which many students may develop in part this "enlargement of mind" to a greater degree than they might in a program of studies of greater diversity.

IV. PROBLEMS OF STAFF AND ADMINISTRATION

Curriculum revision in colleges and universities has usually followed the pattern of selecting, grouping, and arranging in sequence existing courses in established departments, together with the occasional recommendation of a few new courses which are assigned to established departments. From time to time cooperative courses have been created, in which instructors from two departments have shared the responsibility for teaching the course, with the credits in the courses recognized by either or both departments. An integrated curriculum, however, assumes the creation of courses which draw upon the subject

matters and instructional resources of several related departments. As a result, certain administrative and instructional problems arise which are peculiar to such courses, and which call for new patterns of procedure in administration, personnel, and accrediting.

The administration of an integrated program

In the development of programs of integrated or "core" curricula in American colleges and universities, three patterns of administration have emerged. One of these is the creation of a distinct and independent college, with its own dean, its own newly created departments, and with a staff of teachers most of whom give their full instructional time to the courses of the independent college. Such is the pattern, for example, of the General College of Boston University, whose dean, appointed in 1945, sought out and called together a faculty who then planned and set up the courses they were to teach. This General College is completely independent of the much older College of Letters and Science of Boston University and in a sense competes with it for students.

A second plan is the adoption of "core" courses which are required of all students enrolled in the college, including those who will later transfer to specialized courses or other colleges for graduation. Such a program may develop slowly by the gradual adoption of courses superseding earlier electives, as at Columbia College, or it may be adopted complete at one date, as at Michigan State College on July 1, 1944. The essential feature of this plan is that the integrated program replaces earlier patterns of distributive elective courses, and becomes the required uniform pattern in general education for all students.

The third plan is the creation of an alternate, optional plan of general studies which will parallel but not supersede the nonprofessional, general courses required of all students in the college. This plan has the distinct advantage of preserving the administrative and instructional unity of the College of Letters and Science, at the same time offering an option of patterns of general courses in which the alternate program was to be administered within the organization of the College. The decision to recommend the creation of a department of integrated liberal studies was influenced by the familiarity of this administrative organization, including the established practice of lending teachers, administratively assigned to one department, to perform particular functions in other departments.

Selection and retention of teaching personnel

The creation of an independent general college, and the adoption of "core" courses required of all students make for serious staff problems. In an independent general college, the faculty are separated administratively and physically from their colleagues in the College of Letters and Science. A historian, for example, who becomes an instructor of the general college gives his full time to the teaching of integrated courses, and except for his private time lacks the stimulus of research in his special field and association with other historians. In fact, he runs the danger of ceasing to be a historian to become a full-time instructor of elementary integrated courses. Such a situation gives rise to these questions: What will be the effect of separation from research and departmental association upon instructors giving full time to integrated courses? What are their chances of promotion? Of offers from other institutions? Of professional recognition in special fields? How long can top level men be induced to remain in such positions?

It is a distinct advantage of the optional alternate course organization within the college that the staff of the integrated courses can be drawn principally from the members of regularly constituted departments; men and women who will continue to teach advanced courses in their own fields and to pursue their specialized research and writing. Ordinarily no instructor should be called upon to give more than one-third of his time to the integrated program; in some cases the assignment would be for one-sixth time, or one course for one semester of the year.

By such use of the resources of the departments of the college two ends are served: students will have for instructors in the integrated courses men and women of acknowledged standing in particular fields, who are kept professionally alive by research and the teaching of advanced courses. The instructors gain in retaining professional standing with their colleagues, by recognition through publication, and by regular advancement in their respective departments. It is true that one principle will have to be generally accepted: that instruction in one or more of the integrated courses is equivalent in departmental and college service to the teaching of introductory courses in a particular department.

V. DESIRED OUTCOMES

The Program of Integrated Liberal Studies should find its justification principally in the attitudes and abilities of the students who pursue the course. Individual students of exceptional ability can learn from any method or plan of study, so that the future success of a few outstanding students should not be taken as the measure of excellence of any plan of study. The integrated program should be able to meet some of the current problems of all students who are seeking a liberal education, but more especially it should provide a channel to unified, significant meaning in liberal education for the type of student who is seeking to find himself before or while he selects his probable vocation.

The first outcome of the integrated program should therefore be the formation of a student's attitudes toward learning itself, toward his fellow students, and toward the world in which he will have to live. The attitudes thus formed should modify materially the views and prejudices he held when he entered college, and should result in greater respect for himself, a broader tolerance for his fellow men and a willingness to recognize, understand, and do something about the problems arising in his community, in his nation, and in the world. He should be motivated to find satisfaction and intellectual stimulation in the courses he is taking, and through them find a common denominator of unity which will relate the parts to the whole and give meaning to all the work he is called upon to perform.

Second, the integrated program should make clear the value of liberal study as a preparation for living. The student should discover and assimilate the truth that to do something in the world he must also be something, and that the two goals, while complementary, are not the same thing. He should recognize that while he will do his work in response to certain demands of ambition and necessity, he will live a private life for which he alone can provide the foundation. In the studies of general education he should find the sources of emotional and intellectual stability which will make the life he lives within himself as rich and satisfying as he could wish.

A third value to be developed is a sense of direction. Learning, particularly liberal learning, is not of value in and of itself but because it is an awakening, a stimulation, and a challenge to continuous mental activity. College courses are only the summons and the briefing; the mission is continuous and always forward. Hence every course the student takes should not only awaken interest and give a measure of immediate satisfaction; it should leave also a measure of dissatisfaction, of a yearning to go on, coupled with an assurance that he knows the path forward and can strike out for himself. In the ideal sense, no course or program of study is ever completed, but gives only the initial momentum for continuous action through life.

Finally, the integrated program should develop a sense of social responsibility. In the round-up of human experiences which it provides, the implications of one area of human activity upon others can be stressed, leading to a recognition of the complete interdependence of all knowledge and its applications to life. The scientist can no more live for his laboratory alone than can the minister for his pulpit, the judge for his court, or the manufacturer for his factory. To live and work in such social isolation is to augment the

social imbalance, whose outward manifestations are selfishness, greed, and irresponsible power. Through the integration of liberal studies the student should become convinced of the social effects of all individual activity, and develop a sense of responsibility for his own decisions and actions which will help to create the kind of society in which he wants to live and rear his children.

Humanities and Social Sciences at the Naval Academy

BY WILLIAM SLOAN SHIELDS

A COLLEGE with a prescribed curriculum is especially aware of the limitations of time and the responsibility for making every course count in the education of its students. When the product of the college is to be judged in the light of both professional and general education, such considerations become increasingly important.

The Naval Academy curriculum is based on the needs of the future naval officers. These needs may be grouped as follows: (1) an understanding of human values, (2) character and leadership, (3) clear and logical thought, (4) scientific insight, (5) professional knowledge, (6) physical fitness.

Unfortunately there exists no magic formula of percentages which dictates the allotment of semester hours for the accomplishment of the various objectives of the Academy's mission. The engineering schools, in advocating that at least 20 percent of their curriculum be devoted to the humanistic-social stem, are, I am sure, aiming at giving greater weight to an area heretofore underemphasized rather than attempting to resolve the problem on a purely mathematical basis. There is no denying, however, that time is a mathematical factor which must be divided and allotted to the several phases of the curriculum. At the Naval Academy 22.4 percent of the total semester hours is given over to the humanistic and social studies.

A given objective, although often accomplished in varying degrees in different courses, is more intimately related to certain areas of study. The understanding of human values, the building of character and leadership, and the developing of clear and logical thought lend themselves thoroughly to courses in the humanities and the social sciences.

In the department of English, history, and government are grouped the courses in composition, literature, history, foreign policy, economics, international relations, and public speaking. Such an administrative arrangement makes possible a type of integration which would be very difficult in the conventional departmental division. It means the nonexistence of those often decried "departmental barriers" which have in some quarters been quite troublesome to the building of a general education program.

The study of English at the Academy is not limited to courses identifiable by their titles as composition or literature. A new midshipman reports to the Academy during the summer and, if he shows need for it, receives instruction in remedial English. The regular fourth-class (freshman) course in composition and literature teaches him to read with intelligence and understanding and, by constant practice in writing, to express his own ideas clearly and correctly. The principal emphasis during the second term is on literature, especially modern English and American literature. This first year is considered necessary groundwork.

Every course in the department carries forward the development of clear and logical thought and the cultivation of correct and forceful expression. The implementation of such a plan is not difficult among faculty members who teach English and history, English and economics, English and for-

eign policy or some such combination every day of the week. The course in Elements of National Power, which is primarily concerned with geopolitics, includes the writing of ten essays and one term paper.

Three weeks of classroom time are allotted exclusively to extended expository composition and the discipline of research techniques. The midshipmen and instructors spend such time in the library. In addition to the library staff there is available for every twelve to fifteen midshipmen a faculty member who is particularly qualified to advise on research procedure in the field concerned. The same faculty members criticize periodically the organization, content, and style of the midshipmen's papers. The three weeks are not consecutive, but are scheduled at regular intervals throughout the term.

In this way there is provided an opportunity for developing a term paper of some depth of thought, based on an understanding of methods of historical investigation, the interpretation and evaluation of secondary source materials, a paper which is not hurried and, above all, one that is not put off until the last few weeks of the term. It is with this course, which comes in the last term of the first-class (senior) year, that the midshipman completes the study of English begun when he entered the Naval Academy.

In addition to the modern English and American literary selections read in fourth-class year, there is further study of European Literary Masterpieces. Midshipmen read in translation outstanding books from the literature of Spain, France, Germany, Russia, and the Scandinavian countries. In the study of these masterpieces, stress is laid not only upon literary qualities but upon an understanding of the distinctive characteristics of the peoples of these countries, their national and racial traits and motivations, and the background of the age in which the authors wrote and with which the books deal. The intelligent reading of a limited number of outstanding works is considered of more value to the midshipmen than specialization in the literary history of a given country or period.

There is no doubt in the minds of Naval Academy administrative and instructional personnel of the real contributions which literature can make in enabling the midshipmen to evolve that "sense of the first-rate" so ably championed by Sir Richard Livingstone. During the streamlining process of postwar curriculum revision the Naval Academy increased the amount of time devoted to the study of literature.

Dean Hammond of Pennsylvania State College, in talking before the Association of Land-Grant Colleges and Universities in November 1947, praised courses in speech for their value in teaching students how to organize their thoughts logically. The Naval Academy is not concerned with producing orators or polished public speakers. It is interested in producing officers capable of thinking on their feet, able to express themselves forcefully in a clear and logical fashion in staff and command conferences and in connection with their duties both afloat and ashore. Speech instruction, based upon a standard college text in that field, is given to provide midshipmen a knowledge of good speech habits. As in the case of expository writing, speech is cultivated in the various courses of the department of English, history, and government. The greatest degree of integration is attained with the work in History of American Foreign Policy, where every third recitation is devoted to talks based on foreign policy subjects. The after-dinner speaking program of first-class year provides each midshipman an average of three opportunities to talk before his classmates and to receive helpful criticism from the instructors. Extracurricular activity in debating and dramatics is also under the guidance of the same department.

It is vitally necessary that our country be understood and appreciated by those who are called upon to assume duties in her government, to protect her and to represent her abroad. Naval officers must have a sound understanding of our heritage in Western culture, the evolution of our

government, our domestic and foreign economic position, and the impact of our type of government and economy on world affairs. To this end, midshipmen at the Naval Academy study European History, United States Government, Economics, Elements of National Power, and United States Foreign Policy.

The evening lecture series for the first classmen contain lectures on subjects such as philosophy, literature, history, government, economics, and international relations. Such lectures for the current academic year are:

Philosophy and the Liberal Mind — Professor Brand Blanshard, chairman of the department of philosophy, Yale University.

Classics for the Moderns — Miss Margaret Webster, Shakespearean actress, director, and author.

The Role of History — Dr. James P. Baxter, president of Williams College.

Constitutional Law — Rear Admiral Oswald S. Colclough, U. S. Navy, Judge Advocate General of the Navy.

Future Problems of Domestic Economy — Colonel Herman Beukema, U. S. Army, head of the department of social sciences, U. S. Military Academy.

Europe between East and West — Professor Arnold Wolfers, professor of international relations and master of Pierson College, Yale University.

The Strategy of America's Economic Foreign Policy — Professor William Y. Elliott, chairman of the department of government, Harvard University.

Nationalism in the World Today — Professor Hans Kohn, professor of history, Smith College.

Through these evening lectures, which come in the final year and which differ essentially from the individual classroom lecture in the larger perspective they assume, the midshipmen are assisted in fitting together the component parts of knowledge they have attained into a complex whole so that they may have a clearer basis for future evaluations.

As future leaders, who will exercise command under conditions demanding patriotic self-sacrifice and high moral courage, naval officers must be imbued with the ideals of loyalty and devotion to duty and must possess the strength of character to carry through a task to its successful accomplishment. There is no better way to impress such values upon a young man than to confront him consistently with a tradition that has upheld such values. While the whole way of life at the Naval Academy is oriented to such a concept, there are also included in the curriculum specific courses designed to present the panorama of those men who have brought our Navy to its preeminent position. The new fourth classmen study the Makers of Naval Tradition, and the first classmen, the History of American Seapower since 1776.

Charles P. Taft, speaking before the Association of American Colleges in January 1948, criticized the colleges for not teaching human relations. There are a few which are working in this field. One of them is the Naval Academy, which is in its second year of the development of a new venture in applied psychology and the study of human relations as related to leadership. The text *Modern Naval Leadership* is composed of the following three parts:

1. Principles of Leadership — a consolidation of the best material available on the subject, written by the Academic Section of the Executive Department

2. Psychology for Naval Leaders — a new approach to psychology for the leader, written by Dr. Fillmore H. Sanford of the department of psychology, University of Maryland, on contract by the Office of Naval Research

3. Techniques of Leadership — typical midshipman and junior-officer situations based on personal experience. In the compilation of this part of the text, contributions of situations involving decisions in human relations problems were invited from all officers and enlisted personnel in the Navy. These were all case studies drawn from

reality. A careful selection of these problems, with special regard to variety and frequency, was made by the Academic Section.

The pattern of the leadership course is significant. Principles are studied first. Then these principles undergo a "trial by fire" in the attempt to resolve human relations problems in reconstructed situations, the midshipmen applying the psychological principles they consider appropriate. This is followed by a discussion of factors influencing the particular decision and a review of the actual case study and the validity of the decision made. A recognition of the factors influencing a decision is essential to progress on the part of the student. The situations studied are down-to-earth. They represent problems which *will be met* by midshipmen and junior officers in dealing with naval and civilian personnel. The integration of the course with the duties of the upperclassmen within the organization of the Brigade gives these midshipmen a chance to try out the principles of leadership they have studied. It is this rich opportunity for follow-up study that enables the Academic Section of the Executive Department to judge its instruction critically and to continue to improve it.

Let us turn now to the area of foreign languages. There has been much said pro and con regarding the mental discipline value of a given subject. I share the opinion of those who believe that language study is a discipline, that such processes as the perceptive application of moods and tenses involve a high order of logical thought which contributes to the development of mental fiber.

A midshipman can look forward to frequent meetings with foreign people during his career in the Navy. A knowledge of their civilization and culture as well as facility in the use of their language will be a source of much personal enjoyment to him and will enhance his value to the Navy. The Naval Academy language program aims both at developing interpreter and translator categories and at providing an understanding of foreign peoples through study of their literature and their opinions as expressed in current writings and radio broadcasts. The very active language clubs provide numerous opportunities for talking with representatives of foreign countries, drawn largely from the embassy personnel of the nearby capital.

All midshipmen study two years of a foreign language, choosing from any one of the following: French, Spanish, German, Portuguese, Russian, or Italian.

At the end of the fourth-class summer an elementary pronunciation course is given by the oral drill method without study or preparation. It occupies the two weeks in September immediately preceding the beginning of the regular academic year.

The course of fourth-class year covers the essentials of grammar, pronunciation, writing based on graded readings, and intensive oral drill. There is particular emphasis on the spoken language, which includes the use of voice recordings and conversation texts.

Third-class year contains a review of grammar, conversation, and writing based on readings of intermediate difficulty selected from the literature of the foreign language and from contemporary periodicals, as well as from readings on naval subjects, including naval phraseology. The use of voice recordings and conversation texts is continued.

If a midshipman so wishes, and his placement test and aptitude test scores warrant it, he may at the beginning of fourth-class year enroll in an advanced language section. The advanced language courses, which also run for two years, start the new midshipman at second-year college language level, provide a greater familiarity with the literature and civilization of the foreign people and prepare him for qualifying as a Navy translator or interpreter. Advanced courses are, at present, offered only in French and Spanish.

There are foreign language clubs for all classes in French, Spanish, German, Portuguese, Russian, and Italian. All activities are conducted in the language and consist of regular meetings, for-

eign language motion pictures, and after-dinner speaking.

Optional instruction is offered by the department of foreign languages to first- and second-class midshipmen. It requires no preparation and consists of two instruction periods a week during free time.

Shore leave in foreign ports during the summer cruises provides the midshipmen with an opportunity to use their language and to become better acquainted with foreign peoples.

At the beginning of this article I mentioned the limitations of time imposed by a prescribed curriculum and the care needed in the selection of courses to be included. One other consideration must be underlined as of paramount importance. It is the integration of courses in a progressively developing plan. The Naval Academy accomplishes this in two ways: through vertical integration within each academic department, and through horizontal integration among the departments for all four years of the curriculum.

A General Education Course in Physical Science for Superior Students

BY EDWIN C. KEMBLE

THIS IS really a personal account of the writer's notions about the teaching of physical science as general education and the way in which they have been incorporated in a very experimental course of this kind in Harvard College.

I must explain at the outset that there are no less than three other courses in the same general category given under the auspices of our Committee on General Education. Two of them are similar in many respects to my own, but are directed toward students with little or no school background in physical science and with no known marked aptitude for the subject. One of these two is given with extreme skill by Dr. Philippe LeCorbeiller, a gifted engineer and philosopher. It builds on the normal practical interests of American young people by placing the industrial applications and implications of science in the foreground throughout. The other is given by Dr. I. B. Cohen, an experienced teacher of elementary physics, well known for his work in the history of science. This latter course is an all-out application of the historical approach to the teaching of physical science.

In addition, there is the fascinating and more radical experiment given during the past year for upperclassmen by Dr. Conant, Professor F. G. Watson, and collaborators. This course will be given next year on the freshman level. It follows the plan outlined by Dr. Conant in his Terry Lectures at Yale University, concentrating primary attention on the strategy and tactics of scientific development. Instruction in scientific principles is incidental to the case histories around which the course is built.

The courses given by Dr. LeCorbeiller, Dr. Cohen, and myself have been worked out as variants of a single basic pattern. Our plans have been the subject of constant discussion and many of our decisions have been made together. Nevertheless, the other courses which parallel my own are not the primary subject of this article. Rather it is my hope that a somewhat personal account of the thinking which has shaped my own course, conditioned as it has been by my own personal background, will bring out some things of interest that could not so well be said in an account of the whole pattern of Harvard courses in this field. Many of the ideas have no doubt been absorbed from others in the course of discussions in committee and in private. So there is no claim to originality.

It is, perhaps, inevitable that general education courses must reflect the mind and personality of the teacher far more than the old-style purely departmental courses. They are intended to impart a broad point of view, looking at the subject matter in its relation to the whole range of man's practical and intellectual interests and as part of the essential background against which the problems of contemporary civilization must find their solution. It follows immediately that courses of this type should touch on matters far outside the range of competence of any ordinary single teacher. So it happens that I frequently find myself "sticking my neck out" by talking of things concerning which my knowledge is far from ade-

quate. Under these circumstances one hopes that the phrase "this is my own personal view or understanding," together with the whole temper of the discussion, will adequately protect students against academic fraud. It is my impression that the damage done by adopting a rather bold and venturesome attitude toward this question of one's own competence is not very great. The advantages in forcing the growth of one's background, and in achieving breadth in the course without excessive use of visiting lecturers, seem well worth the risk. After all, general education will come into full flower only when the educators are themselves educated out of the extreme specialization of the recent past. In any case, if we adopt this attitude, the course will be colored in no small degree by our own incomplete general education and our own partially worked-out philosophy.

Viewed from this personal angle my story reduces to an account of a succession of choices. They were all made on plausible grounds. Whether they were the best choices is not yet wholly clear.

Presumably the broad ultimate objectives of any physical science course in a general education program must be much the same as for any other. I have conceived these objectives to be essentially three:

1. To acquaint students with the nature of scientific inquiry, and with the rôle of science in our society, in order to fit them for intelligent response to the social problems which center around the progress of science.

2. To acquaint the students with as many of the facts, concepts, terms, and procedures of physical science as time permits, on the assumption that elementary science is essential personal education in a scientific and technological age.

3. To give the students training in logical thought, respect for disinterested inquiry, and an objective, experimental attitude toward problems of all sorts which can be approached scientifically.

In connection with the third objective I realize that there is much skepticism in some quarters regarding the contribution which physical science can make to the logical habits of students. It would certainly be foolish to expect to *solve* the problem of logical thinking in any one course, especially one that has to cover a broad range of material and to handle new concepts in numbers so large that they stretch the assimilative powers of most of the students. Nevertheless I believe that all college courses make a contribution for good or ill to the ability of students to handle abstractions and to think objectively and logically. The physical science courses have a particularly important and essential part to play in this logical education. If they are bungled, they can easily make a negative contribution; for nothing can be more disastrous for the student than to finish a course in a mental state of confusion, his mind cluttered up with undigested material, hoping that in the final examination he can remember enough fragments of information to cover up what he knows he doesn't understand.

Creative thinking, so forcefully brought to the attention of physics teachers by G. W. Stewart, has not been included in the list of major objectives because I have not yet seen how to work successfully toward it without setting aside other and more certainly attainable goals. It goes without saying that such a course as the one I have been trying to develop must stimulate real thinking. To place creative thought in the foreground seems to me, however, more appropriate to an upperclass course than to one designed to orient freshman students with respect to a broad field.

With regard to the implementation of these objectives, the first decision — concurred in by Dr. LeCorbeiller, Dr. Cohen, and myself, but also imposed upon us by the terms under which our courses were set up — was the decision that these courses should be "in science" and not "about science." Students are apt to think that it should be possible to give them an adequate conception of the methods, philosophy, and social importance of scientific inquiry without subjecting them to the painful necessity of absorbing technical details "soon to be forgotten." The contrary opinion of the average scientist is well known. In any

case it was agreed from the beginning that we should concentrate our primary energies on teaching the subject matter of physical science, thus confronting the students with a variety of concrete scientific problems and showing them just how these problems have been solved. This means that the second and more technical objective plays the central rôle in our courses as it does in conventional introductory instruction in the special fields of physical science. It does not mean that this objective is more important than the others. Surely not! But we make it a major premise that the broader aspects of the scientific enterprise are best taught as incidental to instruction in the basic facts, concepts, and procedures which form the substance of science. Since the same decision has been made by nearly every teacher of physical science as general education, there is no need to justify it here.

A second basic decision concerns the accusation of superficiality commonly leveled at "survey courses" in science. How can one cover all the physical sciences in a single year and find time for historical perspective, social and philosophical significance, without handling everything on an extremely superficial level? This, in a way, is the central problem of any such course as mine. Fortunately, our faculty vote, based on the report of the original Committee on General Education,[1] did much to make possible a solution of this difficulty by specifying that physics as the central physical science should be given precedence over its sister sciences in the selection of course material. Thus the curse of the usual necessity for giving each of the major sciences an equal share of the student's time was eliminated at the outset. We are most grateful to all concerned for this decision, without which any satisfactory solution of the problem of "coverage" would hardly have been possible. We are also keenly appreciative of the generous way in which our colleagues in the departments of astronomy, chemistry, and geology have shared in this decision. The normal and natural spirit of nationalism as between one department and another has been conspicuous for its absence since the business of setting up new courses for general education was first placed before the Harvard faculty.

If the different major physical sciences are not to come in for equal attention, clearly there is no need to lay equal stress on all the different chapters of the introductory text in any one of them. So it was early agreed that the screen technique of interlarding "close-ups" with more distant views must be used to achieve a full understanding of selected topics without losing the sense of the structural unity of scientific work. I must confess that I find this procedure much more difficult to apply in practice than I expected it to be in the beginning. It is coming to be recognized, however, that some such technique is essential if courses of this kind are to deserve general academic respect. Unfortunately the existing textbooks in physical science are not based on the principles of selection which have guided us in the choice of material and hence are not as helpful as one could wish.

Another fundamental decision concerns the place of history in such a course as this. My own feeling is that historical perspective is absolutely essential to the presentation of physical science as general education. Only in terms of the historical approach can the significance of science for man's intellectual development and for the organization of man's economic and political life be brought out. Moreover, the historical approach lays the emphasis where it belongs: on the way in which scientific ideas have been developed. It gives color and interest to the presentation and facilitates the integration of the course material with what the student is learning and is to learn in other portions of his academic fare. The total time spent on history need not be large, but an awareness of the historical setting on the part of the instructor should be constantly in evidence. Collateral reading in some of the early scientific classics and in the history of science is also help-

[1] *General Education in a Free Society* (Cambridge: Harvard University Press, 1945).

ful. Such use of the historical approach seems to me the most important ingredient in a general education course in physical science not normally present in the departmental introductions to the special sciences.

One of the most serious difficulties encountered in the first year of our experiment was that of adapting the work simultaneously to the wide range of backgrounds and abilities among the students who appeared before us. On one extreme were a few who could not handle simple fractions or were almost pathological in their dread of a mathematical formula. On the other extreme were students of great ability who had already been through excellent school courses in physics and chemistry. Of students planning to concentrate in the physical sciences there was no appreciable number. The use of the historical approach, the emphasis on philosophical and economic significance, the integration of astronomy, chemistry, and geology with physics — all these sharply differentiate our courses from even the better class of school course in science and so help to meet the problem of student heterogeneity. Nevertheless the central core of physics and chemistry is subject matter in which what is suited to the students with little aptitude and little previous training tends to be a complete bore to the superior students at the other end of the spectrum.

So it was decided at the end of the first year of our experiment — what, indeed, had been foreseen by some from the beginning — that it would be wise to group students in different courses according to their backgrounds, abilities, and interests. The students with the greatest apparent aptitude for mathematics and physical science fell to my lot, while the others were asked to choose between Dr. LeCorbeiller's course and Dr. Cohen's on the basis of their relative interest in the practical applications of science and in the history of science. The experience of the past year under the new policy has convinced us that the move was a step in the right direction. We hope in the future to improve our methods of selection and to enforce them in a more thoroughgoing manner.

The program which I am trying out with the superior students in my present class is an ambitious one. It has seemed to me that my chance of interesting such students would be a maximum if the problem of atomic structure were placed in the foreground of the course and if a sufficient conceptual background could be built up to enable the students to understand the essential features of our present-day conceptions of matter and radiation. The plan is difficult because all the classical branches of physics are fused in the theory of atomic structure. And, of course, it is necessary to carry the class all the way to nuclear fission and Hiroshima if the students are not to be seriously disappointed. Clearly such a program could easily degenerate into a typical survey course. On the other hand, the understanding of the nature of physical science to be derived from such a course, if successful, should be of great value.

The detailed plan of the course divides it into two quite different parts. The chief task of the fall semester is to recount the story of the development of the astronomy of the solar system and the formulation of the basic laws of mechanics by Galileo and Newton. We begin with the determination of the length of the year, the conception of the earth as a sphere and the measurement of its radius, latitude and longitude on the earth's surface, right ascension and declination on the celestial sphere.[2] We go into greater historical and technical detail as we take up the formulation of the heliocentric conception of the solar system by Copernicus and the subsequent work of Kepler, Galileo, and Newton. Vector acceleration and its application to planetary motion and the law of universal gravitation are dealt with on a level suitable to the average college course in physics, but with more emphasis on the semantics of the situation than is customary in such courses. Time

[2] In working out this part of the course I have found Hogben's *Science for the Citizen* extremely stimulating and helpful. Unfortunately the publishers have flatly refused to allow me to reproduce any of the cuts for class distribution.

is taken to discuss briefly the relation of the constructs of physical theory to abstract ideas in general and to consider the standards by which such theories as those of Ptolemy, Copernicus, and Newton are to be valued. A lecture or two is devoted to the impact of the ideas of Newton on the intellectual life of the seventeenth and eighteenth centuries. Outside reading in Randall's *Making of the Modern Mind* and a long, written exercise are used to further clarify this great chapter in intellectual history. The last topic in mechanics deals with the energy principle and leads directly into the subject of heat and the general law of the conservation of energy.

The work of the second semester plunges as rapidly as possible into the story of the development of the ideas involved in our present understanding of matter and radiation. It begins with an account of the kinetic theory of heat, two weeks of basic chemistry, and a limited treatment of electricity and magnetism pointed to the necessities of atomic theory. The paradoxical combination of wave and corpuscle properties in radiation serves to introduce the quantum theory of matter and Bohr's explanation of the periodic table in terms of electron orbits. The relationship of Bohr's scheme to chemical valence is pointed out. The discussion of nuclear processes and nuclear energy takes up most of the remainder of the semester. It goes without saying that with such a crowded program there can be little time for the details of the historical development. The course attempts to maintain a sense of historical perspective, however. Unessential details are ruthlessly omitted and at times there is a judicious resort to dogmatism in dealing with subjects to minor importance. The major ideas are at all times developed on the basis of experimental evidence illustrated, wherever possible, by lecture demonstrations.

The problem of making ends meet on the time schedule is admittedly a difficult one. Fortunately there is a flexible two-hour period available each week for conference and laboratory work in addition to the three regular lectures. At least an hour — sometimes two — of each of these periods is used for quizzing and oral discussion. One-hour laboratory periods have been tried with fair success, but we are tending toward the replacement of individual laboratory work by group demonstrations of quantitative experiments. A careful measurement of the mechanical equivalent of heat, for example, worked out beautifully as a conference demonstration when it would have been too time-consuming for a lecture and too tricky to be carried out successfully by the students themselves.

Simple problem assignments are given out regularly in the fall semester and serve the usual purpose of helping the student to gain a firmer grasp of the ideas involved. There is no such strong emphasis on problem-solving, however, as in elementary courses of the conventional type, because the training of students in the technique of problem-solving for its own sake seems out of place in a general education program. In the spring semester fewer problems are assigned and more use is made of qualitative questions as substitutes. This change in procedure is necessitated by the short time allotted to each of the successive topics.

One minor aspect of the course remains to be mentioned. This is the contact made in the course with the problem of the relation of science and religion. A discussion of this problem in a conventional introductory course in a special science might seem out of place, but in a course that purports to exhibit the relation between science and philosophy the question should not be wholly avoided — at least that is my view. Actually the collateral reading in Randall's *Making of the Modern Mind* thrusts upon the students a consideration of this aspect of the impact of science upon our culture. The issue is of great importance to them and to modern society.

Since scientists, scholars, and students are deeply divided in their attitudes toward religion, it is evident that the thoughtful teacher will step with care in dealing with the topic. What he says will inevitably reflect his personal attitude, but

that should be unobjectionable so long as he does not fraudulently present his own ideas as the conclusions of Science, with a capital "S."

I, myself, believe that religion has still a very vital function to perform in our society. The eighteenth century idea that science is a cure-all which can take the place of religion as a regenerative force in society simply doesn't fit with the history of the last two hundred fifty years. Moreover, it seems to me that the idea that the progress of science has made religion impossible for intelligent people is based on an overestimate of the accomplishments of science — as if the mysteries of the universe were already so fully explored that there is no room left for God outside the bright light of science.

Under these circumstances I have not hesitated to take an hour to discuss the limitations of the scientific method and the legitimate place of faith in the life of man. The discussion has been well received and I trust of some value to the members of my classes.

The Humanities in General Education at the University of Florida

BY ROBERT F. DAVIDSON

A COMPREHENSIVE general education program has been in operation at the University of Florida since 1935. In the common body of knowledge and skills which it provides for every student as a part of his general growth and development, six basic areas are included: American Institutions, Communications (reading, writing, and speaking), the Physical Sciences, Mathematics and Practical Logic, the Humanities, and the Biological Sciences. Comprehensive courses in each of these areas have been developed; a chairman and staff appointed to handle these courses; and a separate college known as the University College organized to care for the general education program as a whole.

During his first two years at the university every student is registered in the University College and the six comprehensive courses mentioned above are a part of his regular program of study, no matter what his plans for later specialized or professional training. Men who plan to go into agriculture or into engineering as well as those going into arts and sciences or into law have this educational background in common. Generous support and endorsement of general education by the professional schools and colleges in the university has indeed been one of the major factors responsible for the success of the program here.

I

The area of the humanities in our general education program includes literature, philosophy, and the arts. There are on the staff men who have been trained in each of these fields and our comprehensive course in the humanities is itself a cooperative endeavor in which all staff members have participated. It is a course designed to help the student achieve a more mature understanding of his cultural heritage, an enlarged appreciation of the enduring values which give meaning and purpose to human life, and a philosophy of life adequate for the needs of our age. Such a task obviously cannot be completed in one college course. Yet its basic place in a program of general education is clear, and the effort to accomplish it even in a limited way has proved exceedingly stimulating to the members of our staff.

A study of the humanities such as we envision must afford an opportunity actually to enter into and share the moving human experiences which have inspired all great literature, philosophy, and art. We have been concerned, therefore, to provide for the student a wide and appealing first-hand acquaintance with literature, philosophy, and art that has some genuine claim to greatness, and likewise to encourage him to face for himself the issues such works raise. This has meant a sparing use of secondary sources, a determined effort to find original sources which will serve our purpose. It has also meant a ruthless cutting down of material included in the course to the point where it can be handled effectively. There is an abundance of excellent material which every teacher of literature, philosophy, and the arts wants included. We have constantly been tempted to include more than the student could successfully

deal with in the time at his disposal. By painful experience we finally realized that the inclusion of everything we thought desirable did not enable us to achieve the objectives of our program, but produced instead confusion or irritation in the mind of the student.

Experience soon convinced us also that a humanities course made up largely of separate and superficial surveys drawn from the various departmental fields failed in its major purpose. It not only failed to integrate the experience of the student and give him a growing sense of unity in his view of life; it failed even to provide for him a meaningful acquaintance with the great ideals and the enduring values in our cultural heritage. For these ideals and values cannot be dealt with effectively in isolated and fragmentary fashion. A part of their very essence lies in the integrating function they perform in human experience. To accomplish our purpose, therefore, we have committed ourselves resolutely to the principle of integration and have moved toward its achievement with growing success, I think, despite the difficulties involved both in terms of the organization of material and in terms also of the traditional attitudes of faculty and students.

Every general education program now in operation is, of course, an outgrowth of the particular situation in which it has developed. The staff which handles and develops it must do so within the framework of its own background of experience and insight. A program too far removed in theory from the outlook and philosophy of those who teach it has little practical chance of success. Our effort to achieve integration has had to move through the channel of staff thought and experience. For this reason the historical or chronological framework was an almost inevitable starting point. It was not only the simplest and most obvious approach; it was the approach which the staff itself was ready to accept.

II

The comprehensive humanities course as now offered is organized on a two-semester basis, and the first semester devoted to a study of "Our Cultural Heritage." In building our program, we have accepted as an underlying assumption the fact that one cannot live fully and intelligently today until he has in some measure at least made the great cultural achievements of the past his own. Born in the twentieth century and for the most part at least in the United States of America, we share the limitations and prejudices of our age and our society as well as its benefits. The accident of birth places a provincialism upon us all. But as intelligent men and women we are not completely bound by these limitations unless we choose to be. It is possible for those who will to become members of a larger society and there to view life from the perspective of the great artists, poets, and philosophers of all time rather than from the more limited perspective of our own day and age. Through the study of "Our Cultural Heritage" we hope to enable the student to develop such an enlarged perspective and more mature sense of values.

The material used during the semester is organized in a chronological framework but an attempt is made to integrate it more effectively in terms of the view of life or the sense of values which inspires and unifies the literature, philosophy, and art included in each unit. Five creative periods in our cultural heritage have been selected for study and the relationship between these periods has been emphasized in the three units into which the work of the semester is divided.

Unit I. The Greek View of Life

Unit II. The Medieval and Renaissance Views of Life

Unit III. Rationalism and the Romantic View of Life

In each unit material in literature, philosophy, and art has been selected with the following criteria in mind:

1. It provides a significant insight into the thought or spirit of the age, and has a place among the great works of its time.

2. It makes a contribution to living intelligently and fully in our day as well as in the past, and has genuine application to the issues we face in our society.

3. It is both intelligible and interesting for a student at the sophomore level in the university. While demanding serious effort on his part, it is not actually beyond his comprehension in vocabulary or idea.

These criteria have caused us to omit material frequently found in somewhat similar courses as well as to re-examine and change our own selections from time to time as we gather evidence as to their effectiveness for our purpose.

The sort of thing we have tried to do in the selection and integration of material can readily be seen in the unit, "The Greek View of Life." The Age of Pericles in Athens has been taken as the focal point in this unit both because of its enduring contribution to our cultural heritage and because of its obvious relationship to the issues we face today. Homer's *Odyssey* (Books V-XII) and Sophocles' *Antigone* are read to acquaint the student with creative and influential literary expressions of the view of life that characterizes the Age of Pericles and also to focus his thinking upon certain perennial religious and political problems which these books raise. Athenian democracy is surveyed and contrasted with the totalitarian state in Sparta to provide historical and social background for our discussion of these issues. An illustrated lecture and subsequent class discussion, emphasizing especially the Parthenon in Athens and the sculpture of the Golden Age, not only indicates the place of the arts in the Greek view of life but provides opportunity also for detailed analysis of the greatest achievements of Greek art. Finally Plato's *Apology* is read, and his *Republic* and Aristotle's *Ethics* are discussed, to afford a careful philosophical consideration of the dominant ideals and values in the Greek view of life at its best.

Throughout the unit attention is given to the implications for our day of the view of life presented here as well as to the details of its literary and historical expression. A consistent effort is made likewise to treat literature, philosophy, and the arts in proper historical perspective as closely related expressions of an underlying sense of values by which all life and thought is molded. In this fashion we have tried to avoid the fragmentation and narrowness of the usual introductory courses where each subject is studied in comparative isolation. Above all else we have sought to leave no gap between the study of our cultural heritage and the daily needs of ordinary men and women. This is not a course for the specialist but one designed as an integral part of a program of general education. The enduring values and the ultimate ends of human life, the things that are worth living for, struggling for, and, if need be, worth dying for, these things have been the concern of the great masters of reality in every age. We have tried to make them the central concern and the integrating principle in the study of "Our Cultural Heritage."

III

To live effectively, however, we must live in the present not in the past. We must see clearly the relevance of inherited ideals and values to the crucial issues of life as we know it today. Hence the second semester of our course we devote to a consideration of "The Humanities and Contemporary Life." Here many conflicting patterns of interpretation are to be found. We are too close to our own problems to be able to see them with the objectivity and detachment that is possible when we are dealing with our cultural heritage. In the confusion of tongues which assail us on every hand, one can easily lose his way. The importance and urgency of the issues involved justifies the risk, however, in our opinion and we have found this semester of the course especially rewarding. It has had immediate interest and appeal for the student, and has left him with the conviction that the humanities are not something removed and distant, apart from the pulse of life, but are rather a vital part and expression of life

itself as he knows it and seeks to live it intelligently and well.

We make no attempt, of course, to survey all aspects of contemporary life as interpreted in the literature, philosophy, and art of our day. Such a task would be manifestly impossible in a one-semester course, and of questionable worth even if possible. The forces which have shaped our world today, however, have certainly produced a radically altered view of the nature of man and of the character of life itself which has had significant influence in every area of the humanities. In our second semester's work, we have given this conflict of values in contemporary life a central place and have sought to make our treatment of it more functional by selecting issues that are closely related to student experience and dealing with these issues in such fashion as to be of immediate value to the student in his own thinking.

The three units in the work of the semester suggest in more specific fashion the major conflicts of value around which our treatment of "The Humanities and Contemporary Life" has been organized.

Unit I. The Conflict of Reason and Appetite or Will in Contemporary Life

Unit II. The Conflict of Individual Interest and Group Welfare in Contemporary Life

Unit III. The Contemporary Interpretation of the Dignity of Man and the Worth of Life

A brief comment upon the first unit will indicate both the kind of material we have included in the course and the way in which we have sought a functional integration of this material in terms of student need and experience. The conflict between reason and appetite in contemporary life is portrayed with directness and clarity in Somerset Maugham's *Of Human Bondage* and Eugene O'Neill's *Anna Christie*. We discuss these two works in detail, seeking both to increase the student's understanding of modern fiction and drama from a literary viewpoint and also to present to him in vigorous and challenging fashion the underlying conflict of values found here. The thought of Schopenhauer provides us with a philosophical discussion of the same issue, remarkably contemporary in insight and equally provocative. The work of certain outstanding modern artists, men like Cezanne, Van Gogh, Picasso, Dali, Maillol and Lipchitz, has been selected to introduce the student to modern art. Here he finds a reflection of the same conflict of values seen already in literature and philosophy and also an excellent insight into the spirit and character of modern art itself. As a concluding assignment each student is asked to write an essay in which he attempts to evaluate for himself the interpretation of life in terms of appetite, impulse, or will, seeking to determine both its elements of validity and its limitations as a sound and workable view of life.

An honest and discerning treatment of the conflict of values in contemporary life inevitably leads one into areas that are highly controversial. Controversial issues certainly cannot be sidestepped, if our course is to afford growth and maturity of understanding for the student; and such issues are not sidestepped in the significant literature, philosophy, and art which reflects the spirit of our age. It has been our aim, of course, to deal with all controversial issues in such fashion as to avoid dogmatism on the one hand and propaganda on the other. At the same time we have recognized our responsibility to provide for the student as a part of his general education a growing understanding of the ideals and values which have given meaning to our American way of life at its best, and also to help him face in more mature fashion the basic decisions which during the coming generation may well determine the fate of our civilization. In such a positive emphasis there are always dangers. When, for example, it leads to deliberately presenting only one side of a question, misrepresenting points of view not in accord with one's own convictions, or by any device purposely preventing a thorough and reasoned consideration of every question before a decision is reached (that is to say, refusing to let the student do his own thinking and make up his own

mind, in so far as these phrases have meaning either psychologically or sociologically), then it has no place in general education. When, however, it means a genuine commitment to human ideals and values and the presentation of these as effectively and forcefully as possible, then general education of the sort we are attempting is impossible without it. But without such an attitude effective education of any sort, whether scientific, professional or democratic, is likewise impossible.

IV

Throughout our course as a whole the effort to achieve integration has been one of the major and continued aims. It has likewise, of course, been one of the most difficult. In dealing with such traditionally distinct fields as literature, philosophy, and the arts, the temptation to divide the course into several separate compartments has constantly presented itself. Obviously this was an easy way of escape, however, not a solution of our problem. As already pointed out, integration of a sort is accomplished by the use of a chronological or historical framework, and this was for us a desirable starting point. Especially in the treatment of "Our Cultural Heritage," it seemed both natural and helpful. But without question, the chronological organization of material has lent itself at the hands of less imaginative instructors to the sort of survey approach in which the attention of the student was centered upon historical detail and secondary sources rather than upon the enlarged insight and understanding of life which great works of literature, philosophy, and art should provide. Our students likewise have constantly reminded us that with this kind of approach we still try to cover too much material in too short a time, and fail to relate it effectively to their own experience.

The analytical approach appealed to us as a way of meeting some of these difficulties. It enabled us to center interest and attention upon great works of literature and art themselves rather than upon comment about them and it also provided an integration of literature, art, and music in terms of certain common principles of analysis and interpretation. We have found it easy, however, when making this approach to lose the spirit and insight into life which distinguishes great literature, art, and philosophy in an emphasis upon technical detail and terminology which the student was required to master. It has been difficult likewise to justify empirically to the student the contribution to his understanding and appreciation that such detail was supposed to make. Unless he brought with him the kind of appreciation we wanted him to develop, he too frequently tended to leave the course without having acquired it.

Our concern has been turned more and more definitely, therefore, to the development of a functional approach which attempts to relate the material studied directly and effectively to student interest and experience, places major emphasis upon enduring values for the student in his study of the humanities, and encourages him to face for himself the central problems raised here for his own developing sense of values and view of life. In other words, we have gradually come to interpret integration in terms of student experience rather than in terms of the organization of subject matter. This approach has proved especially successful in our treatment of "The Humanities and Contemporary Life," and our students have with growing insistence pointed to the desirability of doing more to achieve such a functional integration in the study of "Our Cultural Heritage."

Integration does not take place in the experience of the student, however, unless it has occurred already in the experience of the instructor. Hence we have moved away from a course made up of a series of lectures delivered by experts in their respective fields, and have undertaken instead to have each instructor take the same group of students through the work of the course as a whole. This approach has made the course as stimulating for the staff as for the students — perhaps more so, as a matter of fact. For the creative process of growth and integration has ac-

tually been going on in the instructor's own experience. He has had new insights and convictions to take to his classes from day to day, and has not been tempted simply to repeat to them factual information stored up during his own graduate study or later research. Likewise, as a learner himself, he is much nearer to the experience and outlook of his students. He does not lose contact with them nearly so frequently as does the specialist who is preoccupied with problems and distinctions of his own that have little or no meaning for the growth and development of the average student.

It has not always been easy for us to muster the courage necessary to undertake a task such as this. We have sought, however, to secure for our humanities staff men with broad training and wide interests rather than those preoccupied with scholarly research in limited fields, and we have developed in our own program a type of in-service training that has been of great assistance to us all. Staff members trained in the particular fields under consideration have led a discussion of material to be used in the course each week, describing for the rest of us their own plans for actually handling this material in class. We wanted to find out how they hoped to make the assignment meaningful to their students, not how much they themselves knew about the subject being discussed. It has amazed us all to see how far and how fast we have been able to go in handling effectively the various fields included in our program.

Equally encouraging to us in this undertaking have been the results of our initial attempts to evaluate the work of the course. By the use of a student evaluation form we have found that the members of our staff are frequently doing their most effective work with students in areas other than their own specialty. Instructors trained in art have found among their students much greater enthusiasm for their presentation of literature or philosophy than for their treatment of art. Instructors trained in literature have found that they were doing their most successful teaching when handling philosophy or art; the philosopher that he does a better job when teaching literature than when teaching philosophy. In the light of results such as these, one might well raise some question about the kind of graduate training now being provided for men who plan to make teaching a profession. Certainly we have felt justified in our effort to make general education as meaningful for the staff as for the student.

Integration in the student's experience and view of life has seemed to us to require also that he be given a genuine opportunity to participate in the educative process, not simply the opportunity to listen to lectures or record facts in his notebook. We have adopted, therefore, in so far as possible the discussion rather than the lecture method in our classes, and have tried to limit the enrollment to around twenty-five students in a section. With groups above this number the instructor has generally lost contact with the less vocal students and soon been forced to depend again on lectures, while in classes with fewer than fifteen or eighteen students we have not as a rule found enough group spirit and mutual stimulation. The customary formality of the class situation has always militated against the give-and-take of effective discussion. In order to break down this formality we have experimented with various types of seating arrangement. A number of our classes have met this year in a room equipped with a large central table and comfortable chairs rather than with the traditional row upon row of tablet armchairs. There has been a noticeable increase in student interest and participation in the classes scheduled for this room, and a growing enthusiasm among the instructors of these classes. We expect to increase the number of sections handled in this fashion as rapidly as the necessary equipment and staff are available.

V

It has been especially difficult for us to handle music and the arts successfully in a large required program like ours. The fact that we are committed to a type of integration which rejects the treatment of these fields in separate compartment-

alized fashion has undoubtedly increased our initial difficulties. And our group of students, men for the most part, have come to us as a rule with little interest in music or art. We have been concerned to help them find in this area of experience a creative expression of the same values by which all life is moved and enriched. When dealing with Athens in the Age of Pericles or Florence during the Renaissance it has not been too difficult to do this. And when discussing our own urban and industrial society, it has been possible to deal effectively with modern functional architecture and the social protest school of art from the same point of view. Special exhibits of pictures have been prepared with this end in mind for each unit of the course, placed in our classrooms, and made a part of the regular class discussion. These exhibits have greatly enhanced the effectiveness of the work in art, enabling it to become more largely a visual than an auditory experience. Each week also we give to our entire group of students either an illustrated lecture on art or a music lecture which makes large use of the organ, the piano, or the best available recordings. These lectures are given by specialists in the field, of course, but are directly related to and designed to supplement the regular class discussion.

More recently we have set aside a special room which houses our Carnegie music library and have undertaken to provide here an opportunity for additional experience in the field of art and music. The music that is included in the course can be heard here each afternoon by any students who are interested, and here also are hung art exhibits which illustrate the particular periods or movements with which we are concerned. When modern art was being studied, for example, we had on display here the exhibit on modern art prepared by the Museum of Modern Art, and each instructor arranged to meet his classes once or twice in the Carnegie Room to see and discuss the exhibit. At present we have here an exhibition of work done by students in our own university courses in painting which provides a different kind of approach to some of the questions we have been discussing. Experimentally, one of the members of our staff has also been doing a rapid water color painting for certain classes during the class hour itself, explaining the various techniques as they were actually being employed. This has done much to arouse student interest and to dramatize the discussion of art principles and techniques in a novel and effective fashion.

VI

In the humanities, as much certainly as in any other area of general education, concern with the development of student attitudes, values, and appreciation outweighs interest in merely imparting factual information. Hence we have sought to move beyond the limits of the usual classroom situation in our program and also to keep in close touch with student experience in the course, encouraging students to give us a frank statement of difficulties they were encountering as well as of particular values they were discovering for their own thinking and living. To implement the functional approach a staff committee on evaluation has also prepared a student evaluation form and used it experimentally in their own classes. In this way we have secured a representative sampling of student opinion regarding the effectiveness of teaching method and the general appeal of materials used. A few typical questions dealing with the "evaluation of instruction" will indicate the sort of student reaction in which we have been interested.

1. Does the instructor cover the material that students must know for tests and examinations?

2. Does he present the material so as to make it clear and understandable?

3. Does he emphasize all fields in good proportion: literature, philosophy, the arts?

4. Does he welcome class discussion and allow students to voice their opinions?

5. Does he stimulate students to think for themselves?

6. Does he make the course significant for everyday living?

It has been especially helpful for members of the staff to compare student comment upon such

questions with their own ideas about what they were accomplishing and also with the reaction of students in other sections. It is notoriously easy to deceive oneself in such matters as many of us have discovered. Always, however, in using this student evaluation form the committee has emphasized the fact that its sole purpose is the improvement of his own teaching by each staff member. There has been no use of the results for administrative evaluation of any member of the staff. This policy has removed some initial apprehension on the part of the staff and has made possible a healthy spirit of self-evaluation and growth.

We have found this type of student evaluation a great help to us also in identifying those materials in the course which were effectively arousing student interest and enthusiasm and those which were not. In some cases the results have been surprising, as, for example, our discovery that Homer's *Odyssey* (in the Penguin Edition) was by far the most popular assigned reading in the material dealing with "Our Cultural Heritage." Yet our treatment of it, we found, was of relatively little value to the students so far as they could see. In the music and art, however, where we had been rather concerned about the effectiveness of our program, the students found a much greater contribution to their own growth and insight. It was no surprise to us, on the other hand, to learn that the material included in our study of "The Humanities and Contemporary Life" had a much larger appeal to the students than that drawn from "Our Cultural Heritage," nor that the work of the second semester seemed to them of much greater practical value. Upon the basis of such information as this and from similar data supplied by the staff we have from year to year either improved our method of dealing with the material we were using or, when necessary, substituted other material which we could handle more successfully. Without feeling in any sense that we have solved all our problems, our staff has developed an enthusiasm for general education in the humanities and a desire to do a significant job in this area which in itself has meant much, I think, to the success of our program.

General Education for the Adult in Contemporary Society

BY LOUIS T. BENEZET

OF ALL the collegiate units which nestle within what we call a university in America, those organized for off-campus or evening instruction are the most heterogeneous and ill-defined. A rapid look at the roster of the National University Extension Association reveals that, aside from the modal term, "Extension Division," sixteen different titles are used by twenty-four different institutions to identify this branch of their organization. The situation is perhaps comparable to the varieties of college degrees that cropped up during the late nineteenth century to rationalize the entry of science and technology into the liberal college curriculum. It is also a fairly accurate commentary on the state of university-sponsored adult education today.

Syracuse University in the spring of 1946 approached the problem of reorganizing its twenty-eight-year-old School of Extension Teaching and of Adult Education (which could at least boast the national long-distance record for title). Among the changes proposed and now being put into practice, the choice of a new name would seem to be among the less important. Yet considerable study was made before and, it may be admitted, after the choice "university college" was made. Letters were exchanged with the seven other university colleges known to be in operation.[1] Their replies helped shape the ideas briefly presented here.

What is a university college? As a name, it has stood charges of various kinds ranging from its dismissal as a sort of academic double-talk to the suggestion that it hints at a new philosophy of higher education. The only certainty that emerged from the discussions and correspondence was that there is no unanimity at all among the university colleges contacted as to what the name means in the way of educational purpose or plan. One answer given, for instance, was that a university college is a college that offers courses in the evening.

Liberal arts, business administration, engineering, and fine arts colleges each take their title from a more or less definite area of human study. This area is selected to serve the needs of a particular group preparing to do a certain kind of job in the world. The name "university college" connotes nothing of this sort. Thus we can only turn for guidance to the type of student which a university college, or similar institution, is created to serve. In a pragmatic culture, form is often defined by function. In the character and the needs of the students who come to university college should lie the definition of what a university college ought to be and do.

The university college student is an adult. His age, at Syracuse, ranges from 18 to 62, with strong central tendency at the late 20's and early

[1] Chicago, Denver, Northwestern, Rutgers, Southern California, Tulane, and Washington University (St. Louis). Buffalo and Western Reserve have similar downtown colleges with specific names: Millard Fillmore and Cleveland Colleges, respectively.

30's. Thus, while the figures tend to destroy the popular stereotype of the night college student as a grizzled and dogged old fellow in the autumn of life, they do set him apart from the main-campus age brackets.[2] More than likely he is married, with a family. He works by day in almost any and every type of job ranging from laborer to junior executive. He is giving from one to four weekday nights to coming to class. About his health, background, and politics we know little or nothing, since we do not usually bother the evening college student with these sorts of questions.

His reasons for coming to college are largely economic. He wants to get somewhere. Either he has run into the competition of college-trained men and wants to win it, or he hopes to elevate himself to a level of work where competition with such people is normal. A refinement of the economic motive is found in the man who is making about enough money to satisfy himself but who wants to know and be known by "a better class of people."

Some students do not seem to care about bettering their economic and social status so much as they wish to learn something about the world and about themselves. This is the rarer breed, joyfully hailed and nurtured by the evening college whenever a specimen appears. He is the truly educable adult student.

As in all typologies, the pure strain is seldom found. The typical student (if there be one) in our university college wants to make more money, live a more cultured life, and see himself develop into a bigger and wiser person. This progression of aims the college accepts, hoping that if its education is good enough the student may be persuaded to climb from one level of aims to another. Possibly a small few may be led on to one higher perch, the aim to become an active and responsible citizen. But evening college is after all only two or three hours spliced on to the end of a long day in the marketplace. It cannot work the miracles assigned to it by despairing men, who look on it to succeed where full-time educational and social agencies have failed.

The extent to which college education for adults can succeed, moreover, will depend upon our understanding its own special nature and, more especially, the extent to which it differs from other types and areas of college education.

The university college student's attitude toward education is consistent with his interests and personality. He wants to see close connection between his courses and his life and problems outside. He will accept courses in liberal arts and fundamental science; but he expects them to show at least a working resemblance to the world from which they were once, long ago, abstracted. The most frequent criticism that we get from our evening students — and they are not shy about criticizing — is some variety of, "The teacher evidently hasn't been around very much." Conversely, a course is usually praised when the teacher shows by his teaching that he has been "around." This does not at all cloud the fact that he has to show also that he knows his subject and can teach.

An instructor who had had some difficulty with his fall semester social science class recently called on the telephone. Previously he had said that evening students could not possibly do work comparable to that done on the main campus. This term he calls in a flush of excitement to report the results of an experiment. In the spring term he has been teaching, as he describes it, "more informally down there, departing now and then from the text, and varying the sequence once in a while to take up illustrations from around the city." He compared campus and downtown college results on the first examination; and he finds that the downtown college grade curve is actually slightly better than the other. He is learning how

[2] The picture presented here is of the typical community evening college student as distinguished from veterans, now taking full-time programs in the downtown college because of the student overflow on the main campus. It should be noted, however, that quite a few veterans for economic reasons are shifting from full-time day to part-time evening college.

to teach adults. Or should we say, learning how to teach?

Along with his preference for life-related teaching, the university college student tends to be more interested in learning itself than in schools of learning. He may be listed as a finance major; but if he is attracted by a course called Far Eastern Relations, he is not impressed when told that we are sorry but his quota of so-many hours in liberal arts electives has been exhausted. Similarly, when he hears of a course in Introduction to Music and is told that because of the informal nature of this course it is not yet approved for credit, he asks us what we mean. Neither the tariff walls between colleges nor the Swift's Premium label on a given course is an easy thing to explain to him. He is apt to be rather stubborn about his interest in learning rather than in following our rules about how to get a degree.

At one time in the early twentieth century it was thought that the whole problem of adult interests versus undergraduate requirements might be solved by the "noncredit" course. A noncredit course can present any kind of subject matter on any kind of time schedule, free and independent of the Carnegie credit unit, the local university governing body, and the regional or national accrediting agency. It can take up sociology or sewing, Marx or marksmanship, tax accounting or taxidermy, or a smattering of all in one. The problem, however, has not so easily been solved. Adult students were quick to learn that the noncredit course may be excellent to suit a practical purpose, but it does not pay off in the social and professional world of college graduates. While freely giving out noncredit courses with the left hand, the university has held fast grip on its credit program with its right. A college degree still meant what it had meant; and when the graduate of a noncredit course sequence attempted to show his noncredit course certificate to persons within academic circles, he found all too often that it was looked upon as something roughly equivalent to Sonny's Junior G-man badge.

Nothing in this must be taken to deny the importance of informal or noncredit adult learning. When properly conceived and aimed at the right group, the informal course often seems to come closer to true education than does the process of piling up credits toward a degree. At Syracuse at present, ten different informal courses are under way, ranging from Industrial Production Control to An Introduction to Music. For the completion of planned course sequences in accounting, advertising, sales, and so on, certificates are awarded, which local employers by and large treat with respect. Present plans envisage an expansion of these services.

Some day college degrees may become so numerous that their cash value will have depreciated to the vanishing point. Then we may hope for a system of education wherein people young and old come to college for the sake of learning, as they now go to lectures, concerts, art galleries, and public forums. Then the college, too, will be freed of much of the bookkeeping on standards of student performance, and may instead be able to spend that effort perhaps on standards of teacher performance. But until that millenium we shall probably continue to define a college education as the completion of at least 120 credit hours, or something over 1,600 clock hours, successfully spent in class on a schedule of subjects officially recognized and approved.

So long as this remains the case, the adult student who wants full recognition for his higher learning will want a 120-hour college degree. It does no good to tell him, "Degrees are silly," when we do not practice what we preach. A university college should provide the full course of degree study for him. *It does not follow, however, that the 120-hour course of study it provides need be the same course as the campus undergraduate program.* Instead, a university college degree course should present a program of study that tries, as present warmed-over campus offerings do not try, to identify the character of the adult evening student. The frontier of college education for adults stands at this point. What would such a course of study be?

Some general characteristics may be proposed. It would take its main form and content from the picture presented by the contemporary adult in the contemporary world. This denies no historical, literary, or philosophical approach to such study; neither does it prescribe that any one approach be used. The books assigned may, or may not be, "great books."

It would have as its chief virtue, flexibility. Flexibility would be everywhere — in its admissions policy, in its policy on prerequisites, in its idea of a curriculum drawn from many coadjacent colleges, schools, and departments. A high school diploma might be held to for entrance, as the simplest crude device for separating the mentally fit from the unfit. Yet many a bright man through hard luck has never finished high school; and when the bright man comes along, it compounds his misfortune to say he may not try for a college education. Aptitude tests of several kinds should be held ready to help him prove his ability to do college work.

Specific high school subject requirements would have little place since, in this case, we would not be trying to compress the student into any one particular discipline of college study such as liberal arts, business administration, or engineering.

In the course program, subjects and courses would need neither to be prescribed nor proscribed for the sole reason that they are the posted property of this or that college or school. *The beauty of a university college is that it can draw upon the widespread resources of a university and present many fields of subject matter under one roof.* To reject this opportunity in favor of grinding out a strictly one-college curriculum represents a denial of its own birthright. Yet such is the nature of present evening college degree programs.

A "major," in the conventional undergraduate sense, need not be offered to the adult degree student. The purpose of the college major, no matter how it be sliced, is to teach the student something he can do to earn a living. One of the lost souls of the college campus is the student taking a major which he has no idea how he is going to use. It is heartless and unreal to tell him his major need have no relation to his eventual livelihood. The depression years cured most colleges of this bit of let-'em-eat-cakery; but now and then it still occurs.

The adult student, on the other hand, is already busy supporting himself in the outside world. He may wish to change his occupation, and that indeed may contribute to his interest in taking on college study. But even then no long period of preparation for the world of work need be involved. He will want specific courses for specific purposes; but it is a simple matter to leave him enough electives in each year so that, with counsel, he can arrange specialized courses to follow along a line of professional development.

We would have then at university college a course of study unburdened by prerequisites or the requirements of a major, and open to any man or woman able to show ability to do college work. Courses for specialized training or brush-up in any of the various fields would be available as electives. Note, however, that the core of the program would thus not be specialized training. The core of the university college degree program would instead be general education in contemporary society.

A general education for the adult in contemporary society might be presented in two sections, roughly marking the split between lower and upper divisions in the conventional undergraduate college. In the first two academic years (which may mean three or four calendar years for the man employed full-time by day), a program of courses would be presented which introduce to him focal problems of four areas: (1) communication, (2) economics, (3) government, (4) human organics and personality. It has become fashionable (and probably rightly so) in curriculum discussion to reject the idea of the survey or "canned culture" course. So it might be said here that courses in these areas would feature crucial issues and questions, aiming at starting the adult student inquiring for himself, and would corres-

pondingly avoid plastering him with categorical fact except as called in by him in considering the questions.

In the last two years of the program, the field of general inquiry into modern society might be narrowed to one or, better, two of the world's main geographic and cultural units. It would be normal that the United States would be one; the other might be picked from among Latin America, Western Europe, Russia, and the Orient. In each area, courses would be taken to represent several approaches to studying a culture: art, literature, and language; history; geography; government; economics; sociology; philosophy. Limitations upon the extent of this would be placed by the resources of the university as well as by the available time, interests, and ability of the adult student. The courses might normally come from the established campus departments, provided they were retooled when necessary to fit the adult audience.

We would graduate our university college student, in sum, at the end of from four to eight years spent looking into himself, his fellows, and a couple of the principal areas of the world where modern life, for better or worse, goes on. He would have had a chance moreover through concurrent electives to keep his hand in a specialized field; but we predict he would worry rather less about this as his main course of study proceeded. The name of the degree awarded him seems relatively unimportant at this time, except that all members of the university family would probably be better satisfied if it were a new name. If Columbia's B.S. in General Studies gains currency, let it be that. The important thing is that the degree be recognized as the culmination of a program which, without having had to compromise an inch on quality, has given the adult student a college education truly designed for him.

The proposals presented herein have been purposely given in barest outline. They do not represent any program of adult education now in effect, at Syracuse or elsewhere; they represent only the thinking of a few individuals at that institution as to what might be done. The guiding assumptions are two: that evening adult students live, work, and think differently from daytime campus undergraduate students; and that no program of adult education, degree or otherwise, will meet the needs and interests of adults until it bases itself upon the needs and interests of adults.

A good deal has been said above about the responsibility for the university to meet the needs of its adult students. Little has been said about the university's responsibility to teach its adult students their obligations to society. Yet in a true program of general education the two jobs are concentric and co-extensive. Semantically they probably reduce to the same thing. For if a program of study could succeed, as our evening programs do not now, in giving the adult student an awareness of what modern society is like and where he fits into it, he would see no other course to travel than the course of active citizenship.

The American undergraduate in the liberal arts college hears about "responsible citizenship" at his first fall convocation. He studies it in his freshman survey courses, hears it preached in chapel, recites it in classroom and debates it in assembly hall, hears it once more on Commencement Day. So far as we have been able to discover, little of it sticks to him. The college graduate has been found to vote not much more often or more wisely, or to exercise his citizen's rights and duties with much more energy than his counterpart who never went to college.

With the adult student, we have another chance and in many ways a better one. He can tell us exactly as much about the concrete problems of a citizen as we can tell him; and he can and will put to direct use our mutual attempts at answers. This, a university college might achieve. If we forget that relationship of adult-citizen teacher to adult-citizen student, and by course-plan and teaching method treat him like a campus undergraduate, we lose the chance once more, and for the last time.

Reaching the Toddling Age

BY ALBERT L. PUGSLEY

SCIENTISTS, engineers, and members of allied professions recently have been more effective in publicizing the need for general education than those more closely associated with it. Their recognition of the value of general education for the professional man may be belated, but it is nonetheless heartening. With this stimulus, many schools not previously much concerned with the problem are undertaking critical programs of self-examination, and these programs are leading to many forward steps each year by those schools. Particularly is this true in certain of the land-grant colleges. From the variety of solutions employed, the progress made in one of these solutions at Kansas State College of Agriculture and Applied Science may interest other state colleges, for this institution is in many ways typical of the state college which does not include an arts degree among its offerings. Emphasis at Kansas State College traditionally has been placed upon the development of many technical curricula, each pointed toward specific and often limited objectives. The college includes schools of Arts and Sciences, Engineering and Architecture, Agriculture, Home Economics, and Veterinary Medicine. Frequently the professional requirements for graduation in the professional schools have effectively eliminated any diversification of interest, even when the student showed an inclination to broaden, and when electives were afforded they were usually chosen with advice and approval of the faculty adviser to develop further the student's specialization.

It must be admitted that the notable rise of the professional schools has been in answer to an increasing demand that education be purposeful. When professional curricula first began to emerge, it was not difficult to include all branches of scientific knowledge of the field within the allotted time. Later, the rapid advancement of the sciences and their applications presented such an overwhelming mass of technical detail that any attempt to include the whole in a technical curriculum was necessarily abandoned in favor of a sounder base of the fundamental sciences upon which could be built specialization in the chosen field. Happily, this trend of a base of fundamental science is continuing with the advanced technical requirements being pushed more and more to the graduate years. It is true that acquaintance with some other fields of knowledge was admitted, but in general only when direct relationship to the profession could be seen easily. The resulting product was consistently devoid of knowledge of our cultural heritage, of the society in which the individual lived, of the forces which operate within that society, and of the individual's own social responsibility.

The awakening of the professions to their social responsibilities is having a profound effect upon education as the professions indicate their new needs. Both professional schools and the arts and sciences claim the welfare of society as their dominant objectives, but whereas formerly the functional and cultural objectives appeared to be traditionally divergent, they have lately been accepted as complementary. Actually it is difficult, if not impossible, to dissociate them. To be effective, therefore, general education must be useful to the professions. More important, it must

be used by the professions; it no longer belongs in the sanctified realm of the liberal arts college. In a college organized along departmental lines, as are most state colleges, the ideals of general education must permeate each curriculum of all schools.

Within the boundaries of the technical curricula, the limitations of time for such additional subjects make necessary their selection with the greatest of care. It is argued that a presentation which is interrelated and provides an area of knowledge as a unified whole will be most effective. It will also be most timesaving. This comprehensive type of course is a suitable vehicle by which to achieve the objectives set forth. But there are a wide variety of courses called comprehensive. The term may hold different meanings to different people, just as the remarks of the little girl who was moving to Kansas may be interpreted. Upon being informed by her parents of the impending move, the child went outdoors, looked at the sky, and is supposed to have said, "Good-by, God, we're going to Kansas." Natives of Kansas insist, however, that she said, "Good! By God we're going to Kansas!"

In 1944, an all-college faculty committee at this institution made an exhaustive study of the merits and disadvantages of comprehensive courses as they existed at other institutions which had tried them, and as they might conceivably exist at this institution. After carefully defining what they included in a comprehensive course this committee advised the adoption of four such courses. These recommendations were adopted by the general faculty, and four comprehensive courses were initiated at Kansas State College in the fall of 1944. They were intended to provide the student with a general view of a broad field of knowledge including its historical development, essential principles, bases, concepts, and relation to other fields and to human living.

THE COMPREHENSIVE COURSES

The committee felt that information and understanding of the field gained from a comprehensive course should provide the student with the ability to grasp and orient significant facts and ideas in this field in school and afterwards. It should, in a sense, provide a framework where the student will find many pegs on which to hang and niches in which to place new facts and new ideas. The comprehensive course should develop an appreciation for and an interest in a field of knowledge. Perhaps more than other courses, it should be a springboard of incentive and should provide the starting point from which the student can extend his range, depth, and detail of knowledge in that field.

From one to all four of these courses were incorporated in various curricula as required subjects. In general, it was not expected that the student would take the comprehensive which included his own field of specialization. This was due to overcrowding in the professional curricula, rather than a denial that the integrated treatment and relation of his specialty to the field would have value. Usually the courses have been distributed through the four years of the curriculum, carry four credits each a semester, and run for two semesters. They require three hours of lecture and two hours of discussion a week, and adequate outside reading and study. The four courses which were adopted follow:

Man's Physical World

This course covers all the nonliving phases of man's total environment. It is designed to provide students with a brief working knowledge of the subject matter of the physical science fields commonly designated as astronomy, geology, physics, and chemistry. The contributions of physical science and mathematics to the development of Western civilizations are frequently ignored in the thinking of educated people. Probably the greatest intellectual achievement of the race has been the invention and perfection of the scientific method. To enable students to appreciate what the scientific method is, and what it has done for us philosophically as well as practically, is the chief objective of this course. Man's appli-

cation of the scientific method to the study of the physical factors of his environment has released some of the peoples of the earth from the world of superstition, dogmatism, and drudgery of the past. Americans have been leaders in the machine age, in part because they have understood, controlled, and worked with machines rather than being controlled by them. This skill is one of the by-products of the application of the scientific method to daily living. The ultimate goal of this course is to give a picture of not only the practical and utilitarian achievements of physical science but also its impact on the life of the mind and its repercussion on the social structure.

Biology in Relation to Man

Fundamental relationships between plants and animals and other environmental factors are presented in this course. The structure of representative plants and animals, including man, is presented in some detail so that growth, food manufacture and utilization, reproduction, digestion, assimilation, circulation, respiration, and other life processes may be understood and their importance appreciated; also the relationship of structure to heredity and behavior. Principles which govern the classification and identification of various plants and animals are studied. The economic importance, both positive and negative, of plants and animals is considered; the relation of lower plants and animals to food production, food destruction, disease in lower plants and animals, and how these ravages may be controlled; the utilization, propagation, and conservation of plants and animals useful to man; and finally, a detailed study of man himself — his anatomy, functioning, heredity, and future as a member of the community and the nation. Life is interpreted as an integrative process which results in a dynamic whole.

Man and the Social World

This course considers fundamental characteristics of the society in which man lives. The course is intended to give an understanding of the part man plays in his relations with his neighbors and the broad relations among the peoples of his nation and the peoples of the world. Attention is called to the constantly changing relations among individuals and the many ways in which these changes affect individuals. The social, economic, and political institutions and practices of America are presented, and the student has an opportunity to compare them with the institutions and practices found in other parts of the world. The course is intended to develop a keen sense of the responsibilities and duties of a citizen, and a desire to participate actively in the affairs of the community.

Man and the Cultural World

This course is an orientation to the world's cultures, approached from the standpoints of each culture's history, philosophy and religion, literature, music, art, and architecture. Emphasis is laid upon the outstanding phases of Western culture and civilization from primitive times until the present day. Primary attention is directed to the following phases of culture: (1) Primitive Phase: simple culture of the Stone Age, and complex cultures of Egyptians, Babylonians, and ancient Americans; (2) Classical Phase: cultures of Semites, Persians, Indians, Chinese, Greeks, and Romans; (3) Postclassical or Medieval Phase: cultures of Europeans, Byzantines, Moslems, Hindus, and Confucians; (4) Modern Phase of European Culture: developments; Renaissance, Reformation, scientific revolution, baroque art, Age of Reason, Romantic Age, and revolutions; industrial, social, and political; (5) Recent and Contemporary Age of Culture: industry, invention, and science; world contacts; new knowledge, doctrines, policies, philosophies; developments in literature, art, architecture, and so on; cultural interdependence.

RELATION TO CURRICULA

The amount and scope of work required for the comprehensive are such as to compare favorably with the time and mental effort on the part of the student as are demanded for equal credit in other types of courses.

As organized here, the comprehensive course is not intended to provide complete basic or fundamental knowledge needed by a student who would become a specialist in that field. Courses are regarded as terminal rather than introductory. Such a student, regardless whether he has already taken the comprehensive course, should enroll in the general or basic courses designed to provide an adequate foundation in that field of knowledge. The comprehensive course should manifest an intense interest in human living; it should not be superficial or vague, and it should not attempt to include detail that is unessential to the general view of the field of knowledge.

There is considerable feeling among students that the comprehensive course should be considered introductory for all other courses within the field. It is possible to consider the comprehensive course as introductory if subsequent courses are not taken as the student's major, but where the student is building for a profession or major specialization, the comprehensive alone does not provide an adequate base as substitute for elementary courses. Also, if the comprehensive were to be used as an introductory course for each major, then all students should take the comprehensive. With all students treated alike, it would be possible to eliminate all duplicate material now existing in the beginning courses.

The faculty at this institution is not yet willing or ready to accept all comprehensives for all curricula. Since the recommendation establishing the comprehensive courses did not originally intend that the comprehensive be taken in the area of the student's specialization, it does not appear desirable to accept the use of the comprehensive as a basis for later work in the student's major or professional field. Most institutions which adopt a program of comprehensive courses on a required basis for all students entering professional fields do so either by establishing a uniform first two years with subsequent reduction in the professional training required by the bachelor's degree, or by going to a five-year curriculum.

There is considerable merit in introducing liberalizing influences such as comprehensive courses throughout the duration of a professional curriculum. There is merit also in having a student obtain the over-all view of the interrelation of his chosen field with other fields. Too often this is never achieved. Along with these arguments for the distribution of the comprehensive course over the four-year period, are the supplemental arguments that it is wise to permit the student who has made a professional choice to get some work in that profession as soon as possible, in order that he may see by experience whether he likes it. Students who have made a professional choice, particularly veterans, are extremely anxious to get into their chosen field. It is more sound to flavor a professional curriculum with liberalizing influences than to insist upon a program which will destroy the student's incentive, or at least, cause discontent, because he feels he is not getting anywhere. This does not argue against the merits of the junior division or the single basic freshman year, but only against their practicality for that group of students who have made a professional choice with certainty. For the student who does not have a professional choice, the early introduction to various fields through comprehensives is most desirable.

There are admittedly many problems connected with the offering of comprehensive courses. The constant tendency is to include too much detail unimportant to the general point of view, by burying the principal objectives in a mass of factual details. Often this desire to include too much is not intentional, but arises from the fact that each institution adopting such a program is pioneering not only in a new type of course, but also in developing a new type of teacher. Teachers with formal training for comprehensive courses are not available. Each institution at this time must develop its own from staff members already in the institution. Selection of teachers for comprehensives here was done carefully and the best men were offered opportunities rather than the less able. The men selected were specialists in one of the fields of the area, but were selected for the

breadth of view and intellectual maturity. These teachers formed a committee for each course, which then developed and wrote the syllabi. These syllabi have been revised yearly and are mimeographed for students' use.

Each committee has complete charge of its comprehensive course, deciding what subject matter shall be included, how it shall be presented — in lecture or discussion — and who shall present each part. Gradual progress is being made in obtaining the integration desired, rather than merely making a combination of unrelated parts. Lectures are given by the specialists in different fields, but discussion groups use one teacher for the entire year. It is hoped that eventually all of the lectures for each comprehensive will be given by a single individual.

In developing staff members to teach in comprehensives, the institution must make the proposition attractive enough to cause a professor no regrets at giving up his own field. Teaching loads require careful adjustment, and the new conditions and requirements of this type of educational effort require a high degree of judgment on the part of the administration.

The Humanities

BY WILFRED PAYNE

IT IS a paradoxical circumstance that the instructional method demanded by a conservative subject matter should generate a whole series of original novelties, but this is what has happened in the Humanities course at the University of Omaha. No doubt the late Irving Babbitt was justified in suspecting that originality is a greatly overrated virtue, and the Chairman of the Humanities at Omaha, who has had no courses in education, shares the suspicion, but finds himself lured into modest originality from time to time; this is because a clear definition of the values to be achieved always suggests a method which is independent of precedent.

The subject matter of the course is certainly conservative. We suppose that we are training young men for life; and we agree that they need to be equipped to adjust themselves to a rapidly changing world. We concede that the student should be able to make independent decisions; but we reflect that he can scarcely be said to make independent decisions if he is free to choose only the ideals with which he is reasonably familiar. There is an inconvenient obtuseness involved in the witless assumption that the professor may tell the student what to think. It is a little like the opinion once attributed to Mr. Henry Ford, who is reported to have said that the American people could have any color for their cars they wanted, so long as it was black. Accordingly, it is reasonable to conclude that a liberal education should not only leave the student free to make his own choices, but should fill his mind with furniture. The cherished freedom of the multitude consists in freedom to choose the only ideals they are acquainted with: choice implies familiarity with alternatives, and preference.

From these premises, which are only modestly and inoffensively philosophical, we derive a method for choosing the curriculum content. The Humanities course presents, in the first semester, six views of life: Greek, Medieval, Renaissance, Age of Reason, Romantic, and Victorian. Since we intend to display ideals which actually governed men in their lives, the method is not historical. We ignore the rise and decay of these views of life, concentrate our energies on an exposition of their characteristics at the midpoint of effectual use, and may be said to confine our interest to times when there was one world, not many.

The second semester is limited to an examination of literature and the arts in the contemporary scene. By tracing romantic, realistic, and experimental attitudes in this material, we emphasize the lack of unity in our joint social enterprise.

Since we are communicating the massive tradition to immature minds, we are necessarily interested in the inward and spiritual life of man: his ideals and purposes. We do not scruple to say that one world cannot be secured by legislation; it never has been true that you can legislate righteousness. One world begins with unity of idealism and purpose, and to require men to act as though they wanted the same values when they do not is futile. We are aware of the fact that the major drift of utopian action today is in

the other direction, but remain resolutely in the unpopular minority who believe that ideals precede action.

Thus, we are led to study those periods when, for a brief time, and in a limited locality, life came to a sharp focus. This was true, or sufficiently true, for Athens in the fifth century B.C., largely because the civilized world was a small world. This was true of the English, American, and French mind again in the Age of Reason, because a philosophical attitude generated a temporary unity.

M. Etienne Gilson once observed, didactically, that there are three theories about philosophy — maybe philosophers reflect their times, maybe they lead them, maybe they aim at eternal and immutable truth. If the second guess should prove to be valid, the humanities professors would need to be wary: they might well expose their students to ideals which have never functioned in a whole society. We should be tracing the speculations of powerful minds, instead of acquainting students with workable ideals. Accordingly, we must survey the literature, the art, and the architecture of a society, as well as its philosophy, in order to discover whether the latter records the actual ideals of the people. The architecture of the past is not accessible to our students; hence, in Omaha, we rely upon textbooks at this juncture, but in other areas we eschew textbooks, and read sources. Thus we discover, for example, that Aristotle comes closer to revealing the aspirations of the Greek people than Plato.

We do not expect students to espouse the idealistic naturalism of the Greeks, nor the supernaturalism of the medieval mind; we do hope that they will exercise a genuine choice, since they are acquainted with a multitude of ideals, recognize some of them as widely held today, others as the object of superficial and insincere deference today, and others as lost to the modern mind. Nor do we expect students to construct a code while taking the course; we recognize that there are multitudinous decisions to be made during a normal lifetime, and naïvely hope that many of these decisions will be improved because the student once inherited the great tradition, and can never be a simpleton again.

This is a clear picture of professorial intention; it dictates an equally clear picture of the method by which the intention is to be actualized. We cannot affect the inward and spiritual life of man by instruments which are devoid of vitality. Since the students read sources, they necessarily read samples. We have not been affected by the fashion which decrees the death of the lecture method. We must depend upon the lecture to put the sample in its setting. We assume that, out of the opportunity of leisure, the professor has acquired the breadth of knowledge to do this; and we entertain the modest hope that he can do it with enthusiasm and vitality.

In like fashion, we have had to estimate the utility of other conventional methods of instruction in our program, and here the original novelties begin to multiply. Most of us have had occasion to observe the instructional method of large institutions, which is carried out, pretty commonly, by graduate students. Not all graduate students are bright, and many are not even faintly interested in the subject matter of freshman courses, nor in teaching. Moreover, a sheltered profession tends to attract numerous persons who are deficient in vitality, crippled, or absorbed in nursing their neuroses. It appears that the quiz section ought to be abandoned, and with it the recitation method. This necessity led us to the invention of the tutorial method. Each tutor interviews twenty students a week, hence each student must recite on all of his reading every week, instead of occasionally on some of his reading. For the most part, much more is accomplished, since the tutor finds time for happy and stimulating discussion of the reading. The tutorial conference begins as a recitation, ends, usually, in a contact of minds.

A realist, familiar with the exigencies of college life, will point out that no professor can sustain the high level of enthusiasm implied in our description, and this we have found to be true.

This practical difficulty led to the invention of the device of external tutors. In a community as large as ours, there ought to be a number of young women of excellent education, domiciled here by the accident of marriage, or by its delayed occurrence; both groups need an outlet for their energies and their learning. This guess about our community has proved to be valid; indeed, it is a problem to decide whether the system was adopted to provide for them, or the students. On the morning on which these lines are written, twelve of these young women are acting as tutors to the humanities students. They occupy their offices three half-days a week, apparently spend the rest of their days looking forward to these half-days of opportunity. The high level of enthusiasm is sustained.

A parallel problem arises when we envisage the need students feel for free and vigorous discussion, remote from the meddling impulses of the professor, and this problem has been solved by the introduction of the Humanities Fellows. No doubt students like to talk to each other, and air their misrepresentations as freely as anyone else, and provision should be made for this psychological necessity. The discussion groups, over which the Fellows preside, are emphatically not quiz sections; this is guaranteed by the fact that no grades are given in the discussion groups, and faculty members are forbidden to visit them. A Fellow is a student who took the course last year, and whose enthusiasm equalled that of his tutor. He is willing to audit the lectures the second year, for the privilege of presiding in a discussion group. He is chosen on the assumption that some students are brighter than their professors. A little reflection suffices to show that this is to be expected. In any year, the Fellows are the few remaining when a list of those who got "A" last year is processed by the chairman. First we strike out the names of those whose intelligence is less than "A," as revealed by the psychological entrance test, then we strike out the names of those whose grades in other courses are not high, and then the chairman interviews the remnant. This is an ominous business, for on his narrow shoulders rests the responsibility for determining the intangibles. First he asks himself: "Is the student normal?" Then he asks himself: "Has he enough energy to dominate a classroom?" Last year there were eight persons who survived the scrutiny of the chairman; this year there are five.

The needs of Fellows and Tutors generate a secondary series of novelties; these are too numerous to describe: four syllabi are needed, instead of one, Tutors attend "Tutor's Tutorials," while Tutors, Fellows, and the best students in the class attend Wednesday night meetings in the home of the chairman, to read the classics.

If a liberal education is to train young men for life, it will not suffice for the teacher to be the mouthpiece of the massive tradition; he must exemplify the virtues of the liberally educated in his own life; hence the dependence on Tutors and Fellows in our course. We do not know much about educational method, but we have a clear view of our task, which dictates our method, and that method is dependent on our knowing a man from a menial.

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